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Ohio State University Bulletin

College of Arts Philosophy and Science

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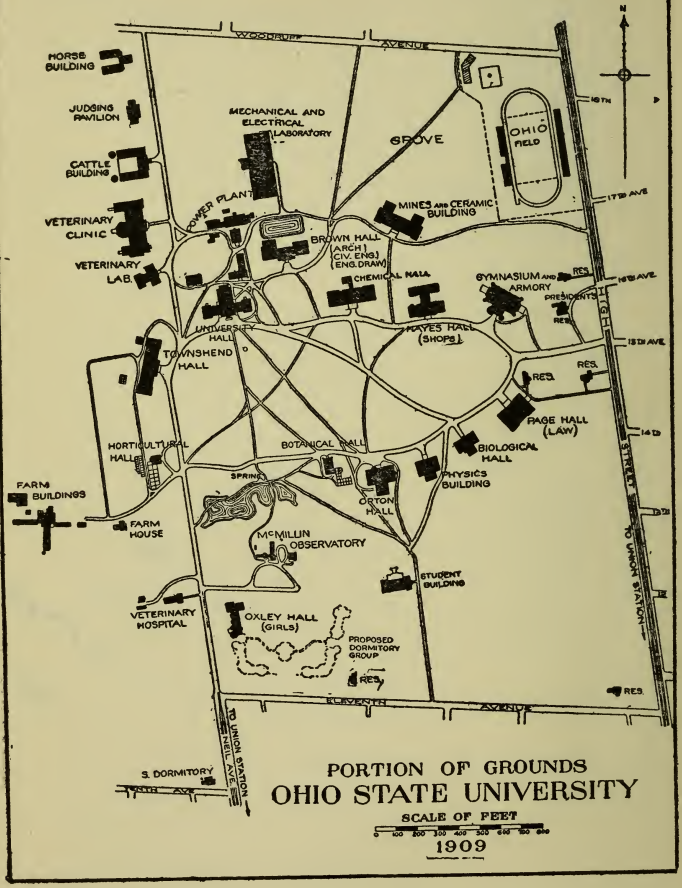
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PORTION OF GROUNDS
OHIO STATE UNIVERSITY
SCALE OF FEET
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1909

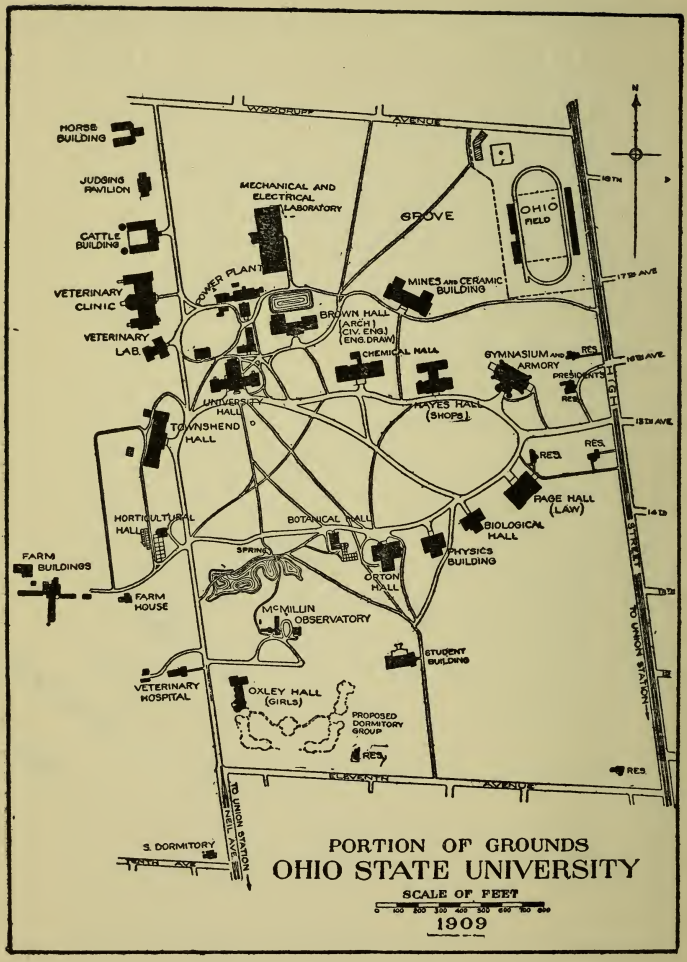
CHANGES IN FEES EFFECTIVE SEPTEMBER, 1910.

Adopted by the Board of Trustees, May 20, 1909.

Fees for students, residents of Ohio, in all colleges except the College of Law, shall be ten dollars a semester, payable in advance as a condition of registration; in the College of Law the fees shall be thirty dollars a semester.

Fees for non-resident students in all colleges except the College of Law shall be fifteen dollars a semester, payable in advance as a condition of registration; in the College of Law the fees for non--resident students shall be thirty-five dollars a semester.

Non-resident children of alumni in the matter of fees shall be treated as residents of Ohio.



PORTION OF GROUNDS

OHIO STATE UNIVERSITY

SCALE OF FEET

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1909

OHIO STATE UNIVERSITY

The Ohio State University, located in Columbus two miles north of the Union Station, is a part of the public educational facilities maintained by the State. It comprises seven colleges:

The College of Agriculture and Domestic Science,
The College of Arts, Philosophy, and Science,
The College of Education,
The College of Engineering,
The College of Law,
The College of Pharmacy,
The College of Veterinary Medicine.

This bulletin is devoted exclusively to the work of the College of Arts, Philosophy, and Science.

(NOTE: In requesting any of the announcement bulletins of the University, address the University Editor, Ohio State University, Columbus, Ohio.)

UNIVERSITY CALENDAR

1909

Entrance examinations (8 a. m.), Tuesday to Saturday, June 15 to 19.

Summer term, June 21 to August 13.

Entrance examinations (8 a. m.), Tuesday to Saturday, September 14 to 18.

First term begins—Registration Day—Tuesday, September 21.

President's Annual Address (11 a. m.), Friday, September 24.

Latest date of admission to candidacy for a degree at the Commencement of June, 1910, Friday, October 1.

Thanksgiving recess, November 25, 26, and 27.

Latest date for filing thesis subject, Wednesday, December 15.

First term ends, Wednesday, December 22.

CHRISTMAS VACATION

1910

Second term begins—Registration Day—Tuesday, January 4.

Washington's Birthday, Tuesday, February 22.

Second term ends, Friday, April 1.

SPRING RECESS

Third term begins—Registration Day—Wednesday, April 6.

Field Day—Athletic Association—Saturday, May 7.

Competitive Drill—Cadet Regiment—Saturday, May 21.

Final examinations, Friday to Thursday, June 10 to 16.

Latest date for presenting thesis, Saturday, June 11.

Entrance examinations (8 a. m.), Tuesday to Saturday, June 14 to 18.

Latest date for filing bound copy of thesis, Friday, June 17

Commencement, Wednesday, June 22.

COLLEGE OF ARTS PHILOSOPHY AND SCIENCE

This College comprises those courses of study that are designed to furnish a liberal education in the languages and literatures, the sciences, mathematics, philosophy, history, politics, administration, economics, sociology, and commerce, as distinguished from the technical and professional courses which constitute the work of the other colleges.

DEPARTMENTS

The College of Arts, Philosophy, and Science includes work in the following departments: American History and Political Science, Anatomy and Physiology, Astronomy, Bacteriology, Botany, Chemistry, Economics and Sociology, English, European History, Geology, Germanic Languages and Literatures, Greek Language and Literature, Latin Language and Literature, Mathematics, Military Science and Tactics, Philosophy, Physical Education, Physics, Psychology, Romance Languages and Literatures, Zoology and Entomology. The following departments also offer a limited amount of work as elective studies in the College of Arts, Philosophy, and Science: Architecture, Art, Civil Engineering, Domestic Science, Engineering Drawing, Electrical Engineering, History and Philosophy of Education, Mechanical Engineering, Mechanics, Metallurgy and Mineralogy.

GRADUATE COURSES

The graduate instruction given in the College of Arts, Philosophy, and Science is organized in a Graduate School. A special bulletin describing the organization, admission requirements, and work of the Graduate School may be obtained on application to the University Editor.

THE LAKE LABORATORY

The University maintains a Lake Laboratory at Sandusky during the summer vacation, which is designed to provide opportunity for the investigation of the biology of the lake region, and for giving certain courses of instruction in the departments of Botany and Zoology and Entomology. For further information write for a special bulletin, which may be obtained from the University Editor.

BUSINESS ADMINISTRATION AND SOCIAL SERVICE

Students desiring to prepare themselves to pursue a business career or to engage in philanthropic work are invited to send for a special bulletin entitled Courses in Business Administration and Social Service.

FACULTY AND INSTRUCTORS

WILLIAM OXLEY THOMPSON, D. D., LL. D., PRESIDENT of the University.

JOSEPH VILLIERS DENNEY, B. A., DEAN and Professor of English.

CHARLES A. BRUCE, B. A., SECRETARY and Professor of Romance Languages and Literatures.

WILLIAM HENRY SCOTT, LL. D., Professor of Philosophy.

SAMUEL CARROLL DERBY, A. M., Professor of the Latin Language and Literature.

JOSIAH RENICK SMITH, A. M., Professor of the Greek Language and Literature.

BENJAMIN FRANKLIN THOMAS, Ph. D., Professor of Physics.

*GEORGE WELLS KNIGHT, Ph. D., Professor of American History and Political Science.

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*Absent on leave 1908-1909.

Rosser Daniel Bohannan, B. Sc., C. E., E. M., Professor of Mathematics.

Albert Martin Bleile, M. D., Professor of Anatomy and Physiology.

Benjamin Lester Bowen, Ph. D., Professor of Romance Languages and Literatures.

William McPherson, D. Sc., Ph. D., Professor of Chemistry.

Herbert Osborn, M. Sc., Professor of Zoology and Entomology, and Director of the Lake Laboratory.

Henry Curwen Lord, B. Sc., F. R. A. S., Professor of Astronomy, and Director of the Emerson McMillin Observatory.

Charles Smith Prosser, D. Sc., Ph. D., Professor of Geology.

John Adams Bownocker, D. Sc., Professor of Inorganic Geology, and Curator of the Museum.

Alfred Dodge Cole, M. A., Professor of Physics.

Wilbur Henry Siebert, M. A., Professor of European History.

Lewis Addison Rhoades, Ph. D., Professor of Germanic Languages and Literatures.

David R. Major, Ph. D., Professor of Psychology.

Charles Bradfield Morrey, B. A., M. D., Professor of Bacteriology.

James Edward Hagerty, Ph. D., Professor of Economics and Sociology.

Henry Russell Spencer, Ph. D., Professor of American History and Political Science.

George Washington McCoard, M. A., Professor of Mathematics.

ARTHUR WINFRED HODGMAN, Ph. D., Professor of the Classical Languages and Literatures.

WILLIAM EDWARDS HENDERSON, Ph. D., Professor of Inorganic and Physical Chemistry.

JOSEPH RUSSELL TAYLOR, M. A., Professor of English.

CHARLES WILLIAM FOULK, B. A., Professor of Analytical Chemistry.

THOMAS HARVEY HAINES, Ph. D., Professor of Psychology.

FRANCIS LEROY LANDACRE, B. A., Professor of Zoology and Entomology.

WALLACE STEDMAN ELDEN, Ph. D., Professor of the Classical Languages.

MATTHEW BROWN HAMMOND, Ph. D., Professor of Economics and Sociology.

HARRY WALDO KUHN, Ph. D., Professor of Mathematics.

GEORGE H. MCKNIGHT, Ph. D., Professor of English.

KARL DALE SWARTZEL, M. Sc., Professor of Mathematics.

ARTHUR ERNEST DAVIES, Ph. D., Professor of Philosophy.

JOHN H. SCHAFFNER, M. A., M. S., Associate Professor of Botany.

JAMES STEWART HINE, B. Sc., Associate Professor of Zoology and Entomology.

FREDERICK EDWARD KESTER, Ph. D., Associate Professor of Physics.

WILLIAM LUCIUS GRAVES, M. A., Associate Professor of English.

EDGAR S. INGRAHAM, Ph. D., Associate Professor of Romance Languages.

WILLIAM LLOYD EVANS, Ph. D., Associate Professor of Chemistry.

Berthold August Eisenlohr, M. A., Associate Professor of the Germanic Languages and Literatures.

Eugene Franklin McCampbell, B. S., Associate Professor of Bacteriology.

Edgar Holmes McNeal, Ph. D., Assistant Professor of European History.

Fayette Avery McKenzie, Ph. D., Assistant Professor of Economics and Sociology.

Carson Samuel Duncan, M. A., Assistant Professor of English.

Walter Thompson Peirce, Ph. D., Assistant Professor of Romance Languages.

John B. Preston, M. A., Assistant Professor of Mathematics.

Robert F. Griggs, M. A., Assistant Professor of Botany.

James Renwick Withrow, Ph. D., Assistant Professor of Chemistry.

Frederic C. Blake, Ph. D., Assistant Professor of Physics.

Edmund Sewall Manson, Jr., S. M., Assistant Professor of Astronomy.

Raymond Jesse Seymour, M. S., M. D., Assistant Professor of Anatomy and Physiology.

Oliver Cary Lockhart, M. A., Assistant Professor of Economics and Sociology.

Walter Larabee Leighton, Ph. D., Assistant Professor of English.

Archibald Mowbray Burnham, M. Ph., Assistant Professor of English.

Louis Albion Cooper, B. A., Assistant Professor of English.

CHARLES E. BLANCHARD, LL. B., Assistant Professor of English.

EDWIN PLATT TANNER, Ph. D., Assistant Professor of American History and Political Science.

NATHANIEL W. LORD, E. M., Professor of Metallurgy and Mineralogy.

OLIVE JONES, B. A., Librarian.

WILLIAM T. MAGRUDER, M. E., Professor of Mechanical Engineering.

GEORGE L. CONVERSE, Captain (Retired), U. S. A., Professor of Military Science and Tactics.

FRANCIS C. CALDWELL, A. B., M. E., Professor of Electrical Engineering.

ALFRED VIVIAN, G. Ph., Professor of Agricultural Chemistry.

JAMES ELLSWORTH BOYD, M. S., Professor of Mechanics.

THOMAS EWING FRENCH, M. E., Professor of Engineering Drawing.

FRANK PIERREPONT GRAVES, Ph. D., Professor of the History and Philosophy of Education.

H. SHINDLE WINGERT, M. D., Director of Physical Education for Men.

RUTH AIMEE WARDALL, M. A., Professor of Domestic Science.

CHARLES LINCOLN ARNOLD, M. Sc., Associate Professor of Mathematics.

SAMUEL EUGENE RASOR, M. A., M. S., Associate Professor of Mathematics.

MARY R. LAVER, Associate Professor of Art.

NORMA SEARING, B. P. E., Director of Physical Education for Women.

ROBERT F. EARHART, Ph. D., Assistant Professor of Physics.

GEORGE D. HUBBARD, Ph. D., Assistant Professor of Geology.

May Thomas, Ph. D., Assistant Professor of Germanic Languages and Literatures.

Adolf Busse, Ph. D., Assistant Professor of Germanic Languages and Literatures.

Alfred Dachnowski, Ph. D., Assistant Professor of Botany.

John R. Chamberlin, Assistant Professor of Civil Engineering.

Charles Clements Morris, M. A., Assistant Professor of Mathematics.

Grace Marie Bareis, B. A., Assistant Professor of Mathematics.

Alfred Ewington, A. M., Instructor in Romance Languages.

Frank Kelton Bailey, Ph. D., Instructor in Physics.

Frederica Detmers, M. Sc., Instructor in Botany.

Charles Sheard, M. A., Instructor in Physics.

Clarence C. Vogt, M. A., Instructor in Chemistry.

Clarence Addison Dykstra, B. A., Instructor in American History and Political Science.

Samuel Morris, B. A., Instructor in Chemistry.

Sarah Tracy Barrows, M. L., Instructor in German.

Edwin Long Beck, B. A., Instructor in English.

Robert Oscar Busey, M. A., Instructor in German.

Leland Dale Dorney, B. A., Instructor in Economics.

Vittorio Falorsi, D. L., Instructor in Romance Languages.

William Clifford Morse, M. A., Instructor in Geology.

J. Thomas Kibler, Assistant in Physical Education for Men.

Howard J. Lucas, B. A., Assistant in Chemistry.

EXECUTIVE COMMITTEE

The Dean, *ex officio;* The Secretary, *ex officio;* Professor Bleile, Professor Cole, Professor Bruce, and Professor Haines.

ADMISSION

Applicants for admission must be at least sixteen years of age. The College is open on equal terms to both sexes.

UNIVERSITY ENTRANCE BOARD

The admission of students is in charge of the University Entrance Board, which determines the credits which shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the Entrance Board, Ohio State University, Columbus.

ADMISSION TO COURSES LEADING TO A DEGREE

There are two modes of admission—by examination and by certificate.

ADMISSION BY EXAMINATION

The Entrance Board will conduct entrance examinations June 15 to 19 and September 14 to 18, 1909. A part of the examinations may be taken in June and the remainder in September. All applicants for admission who are not graduates of an accredited or recognized secondary school or approved preparatory school, or who do not possess certificates from the State Board of School Examiners, must take examinations for admission.

SCHEDULE.—Examinations will be from 8 to 12 a. m. and from 1 to 5 p. m.

Tuesday	a. m.	History: Greek and Roman, English, General.
"	p. m.	Composition and Rhetoric, Classics, Chemistry, Geology.
Wednesday	a. m.	Algebra, German.
"	p. m.	Plane Geometry, Physical Geography.

Thursday	a. m.	Civics, Solid Geometry, Zoology.
"	p. m.	Beginning Latin, Caesar, Astronomy, Elements of Agriculture, Trigonometry.
Friday	a. m.	Physics, Physiology, Botany.
"	p. m.	U. S. History, French, English Literature.
Saturday	a. m.	Vergil, Cicero, Domestic Science.

ADMISSION BY CERTIFICATE

Applicants may be admitted without examination on presentation of properly indorsed certificates from such secondary schools as have been accredited* or recognized by the University, or from approved normal schools, or from the State Board of School Examiners under the following provisions:

(a) If from secondary schools, the certificate must show that the applicant is a graduate in good standing of the school issuing it; and also must state in detail the studies pursued, the text-books used, the amount of work done in each study, the amount of time devoted to it, and the fact that the applicant has passed in the work.

(b) Any entrance requirement not covered by a certificate must be met by examination.

Blank certificates may be obtained by addressing the Secretary of the Entrance Board. Certificates should be filled out and returned to the University as early as possible after the close of schools in June. Since errors are frequently made in transcribing the school record on the blank form, the applicant should verify his certificate before presenting it to the Entrance Board and see that it gives him credit for all his school work.

REQUIREMENTS BY UNITS

A unit is the equivalent of a course of study covering a school year of not less than thirty-six weeks, with five periods of at least forty-five minutes each per week. To

*Regarding accredited and recognized schools, see page 86 and following.

obtain full standing, applicants under twenty-one years of age must have credit by examination or certificate for fifteen units—of which three shall be English, one history, two mathematics, one physics or chemistry, and four language other than English—selected from the following list:

English ..... 3 units
(Foreign students may substitute their native language for the English requirement.)

American History or American History and Civil Government ..... 1 unit
Ancient History (Greek and Roman) and Medieval History to 814 A. D..... 1 unit
Medieval and Modern History (from 814 A. D. to the present)..... 1 unit
(For the present General History may be counted as a unit, but not in addition to Ancient or Medieval and Modern History.)
English History ..... 1 unit

Algebra (through quadratics)..... 1 unit
Algebra (beyond quadratics)..... ½ unit
Geometry (plane)..... 1 unit
Geometry (solid)..... ½ unit
Trigonometry ..... ½ unit

Latin ..... 2, 3, or 4 units
Greek ..... 2, 3, or 4 units
German ..... 2, 3, or 4 units
French ..... 2, 3, or 4 units
Spanish ..... 2, 3, or 4 units
(Not less than two units of any language will be accepted.)

Physics ..... 1 unit
Chemistry ..... 1 unit
Physical Geography ..... 1 unit
Zoology ..... 1 unit
Botany ..... 1 unit

Physical Geography Zoology Botany Physiology	For the present any two of these may be counted together as..... 1 unit
Agriculture Free-hand Drawing Manual Training Domestic Science	The Entrance Board may, after investigating each claim, grant a total credit of not to exceed.. 2 units

Preparation in excess of the requirements in any subject will not be credited unless it amounts to one-half unit.

No student under twenty-one years of age will be admitted to college if he is conditioned in more than two of the fifteen units. All entrance conditions must be removed within two years after admission.

Students over twenty-one years of age are admitted in accordance with the provisions stated under "Admission to Special Studies," page 16.

The extent and character of the work required in each subject mentioned above is explained in a special bulletin which will be sent to any address upon request. In general it may be stated that the definitions of the North Central Association of Colleges and Secondary Schools are accepted as our definitions.

ADMISSION WITH ADVANCED STANDING

Applicants who have completed at least one year's work in an approved college, and who bring official and explicit certificates describing their courses of study and scholarship, and letters of honorable dismissal, will be admitted in accordance with either of two plans:

(1) The entrance units on which the candidate was admitted to the approved college will be accepted at their face value; deficiencies will be made up from the college credits presented, and advanced credit will be given for any remaining satisfactory work; or

(2) One year's work will be accepted in lieu of entrance units and the candidate will be admitted without examination and without conditions, but without any advanced standing on the year's work.

Applicants who have completed less than one year's work in an approved college must satisfy the entrance requirements in the usual way, and will then be given credit for any satisfactory work for which they can offer certificates.

ADMISSION TO SPECIAL STUDIES

Students who desire to pursue special lines of work and do not desire to become candidates for a degree, will be admitted on the following conditions:

1. The regular entrance requirements must be satisfied.

2. But applicants who are not less than twenty-one years of age, after obtaining credit for the common English branches and for such other subjects as may be necessary to qualify them for the classes that they wish to enter, may, on the presentation of satisfactory reasons, be admitted to any class in the college; provided, that if any student who has been admitted on these conditions afterwards becomes a candidate for a degree, he shall pass the omitted entrance examinations at least twelve months before the degree is conferred.

3. Before entering the College, students desiring to pursue special work are required to lay before the Executive Committee, for approval or modification, a written statement of the end they have in view, the studies proposed for the attainment of that end, and the probable period of attendance. Such students will be held as strictly to their accepted schemes of work as are the regular undergraduates to the course of study.

4. Permission to enter as special undergraduates will be refused to all who fail to give satisfactory evidence of

definiteness of purpose, and will be withdrawn whenever the conditions on which it was granted cease to exist.

ADMISSION TO GRADUATE WORK

A special bulletin devoted exclusively to the Graduate School may be obtained on application to the University Editor.

REMOVAL OF ENTRANCE CONDITIONS

The removal of entrance conditions is administered by the Entrance Board. Conditions may be removed (1) by examination (for schedule of examinations, see page 12); or (2) by the substitution of excess work in other approved subjects; or (3) by the substitution of other equivalent work to be done at the University at such times and in such subjects as the Entrance Board shall direct. All entrance conditions must be removed before the beginning of the third year of residence at the University.

REQUIREMENTS FOR GRADUATION

UNDERGRADUATE COURSES OF STUDY

The work of the College of Arts, Philosophy, and Science is organized on the group-elective system. Several of the groups correspond in their chief studies and learning aims to the "courses"* formerly offered, but with much greater flexibility and much freer opportunities for election. Many other "courses" having equally specific aims are also provided in the groups. The groups, so far as at present arranged, number twelve. This number will be increased as reasonable demand may arise for new groups. The characteristic features of each group may be judged from its name, which is made up of the names of the chief studies

*Arts or Classical, Latin Philosophy, Modern Language Philosophy, English Philosophy, General Science, Commerce and Administration, Education, Preparatory to Law, Preparatory to Medicine, Preparatory to Journalism.

of the group. The groups at present recommended are given on pages 22 to 24.

About one-third of every student's curriculum is prescribed. Each student is required to lay sufficiently broad foundations, during the first two years, in English, in two other languages to be chosen by himself, in mathematics and one science, or in two sciences to be chosen by himself, and in history, economics, English, or philosophy. The remaining two-thirds of each student's work is elective; but in order to insure substantial results in the studies thus freely chosen, the student is required to continue two of his first-year studies (any two) through the second year, one of his second-year studies (any one) through the third year, and one of his third-year studies (any one) through the fourth year. In order to guard against the danger of too narrow or too wide a range of work, a maximum and a minimum number of departments is fixed in which the student is allowed to work during any one year. In the first and second years the number of departments thus fixed is four or five; in the third and fourth years the number is three or four.

SUMMARY AND REQUIREMENTS

On satisfactory completion of 180 term hours under the restrictions prescribed below, the student will be recommended for the Degree of Bachelor of Arts.

The 180 term hours must include the following, amounting to 57 term hours:

(a) English 1, 2, and 3. (2-2-2) 6 term hours.

(b) Two of the following languages: (8-8-8) 24 term hours.

Greek 1 or 7, 8, 9; Latin 1, 2, 3;
French 1 or 2; German 1 or 4; Spanish 1 or 2.

(c) Mathematics 31, 32, 33, and 24. (6-6-6) 18 term hours, or

Two of the following: at least (6-6-6) 18 term hours.

Mathematics 21, 22, 23; Physics 11 or 2;
Chemistry 7 or 44 and 12; Botany 21; Zoology 31.
Geology 17; Physiology 1; Astronomy 1.

(d) One of the following: (3-3-3) 9 term hours.

European History 1, 2, 3 or 14; American History 1;

Political Science 1; Economics 30, 31, and 32;
Psychology 1 and Psychology 1a; Philosophy 100 and 101; English 8.

For the remaining 123 term hours required for graduation the student may elect from any courses announced in this college (see page 26 and following) for which he is qualified.

FIRST YEAR

(a) Fifteen or sixteen hours each term, chosen from the prescribed work indicated above, including English 1, 2, 3.

(b) Cadet Service (men); Hygiene and Physical Training (women); required throughout the first year.

SECOND YEAR

(a) Fifteen hours each term. This must include all the prescribed work not done in the first year; the other work of the second year to be in three or four departments of which at least two shall be departments in which the student has worked during the first year.

(b) Cadet Service (men); Hygiene and Physical Training (women); required throughout the second year.

THIRD YEAR

Fifteen hours each term in three or four departments, at least one to be a department in which the student has worked during the second year.

FOURTH YEAR

Fifteen hours each term in three or four departments, at least one to be a department in which the student has worked during the third year.

EXTRA HOURS

A student who has postponed a study in group (b) from the first to the second year, may take sixteen hours in the second year, and by the permission of the Executive Committee a student who has shown exceptional proficiency may be allowed to undertake from one to three extra hours; but in no case will any student be permitted to take more than eighteen hours. No extra hours will be granted to a first-year student, or to any student with conditions outstanding.

RULE GOVERNING ELECTIONS

Each student enrolled in the College of Arts, Philosophy, and Science must file at the Registrar's office not later than June 1st of each year a complete statement of the courses he wishes to enter the following year. Blanks for this purpose may be obtained of the Registrar.

FEE FOR CHANGES IN SUBJECTS OR SCHEDULE

After ten days from registration day changes in subjects or schedule, if made at the instance of the student, shall be made only upon the payment of a fee of $1.00 for each change. Requests for changes for the second and third terms must be filed with the College Secretary on or before the third day of the term, or the fee of $1.00 will be assessed for each change made at registration at the request of the student.

STUDENT ADVISERS

The Faculty of Arts, Philosophy, and Science has provided a system of advisers, the chief objects of which are:

(1) to assist the undergraduate in choosing studies that will result in a well-rounded course and will achieve most economically the purpose which the student has in view in his course; (2) to promote closer personal relations between student and instructor and thus to aid the student, so far as possible, in all matters connected with his university life. On entering the University each student is assigned by the Executive Committee to a temporary adviser to whom he is cordially invited to resort for counsel as often as the need arises. Before the close of the year each student chooses a permanent adviser. Each student is required to secure the signature of his adviser to his election-card in June of each year, and to petitions, at any time during the year, for a change in work or for increase or diminution of work.

FIRST-YEAR OPTIONS

In order to meet the requirements for graduation, the first-year student must arrange his work on one of the following plans:

I. English; two languages; two sciences, or mathematics and one science, or mathematics alone; deferring until the second year the selection from group (d) above.

II. English; two languages; mathematics or science; one subject from group (d); deferring until the second year a second subject from group (c) above.

III. English; one language; two sciences, or mathematics and one science, or mathematics alone; one subject from group (d); deferring until the second year the second language from group (b) above.

In order to assist the student in his choice of work for the first two years, more specific directions are given below in connection with various natural groupings of studies. *These groups are not mandatory.* The student may make other combinations than those suggested, provided his selection of studies fulfills one of the three options given above. In the second year many other combinations are possible.

The time schedule, however, is arranged primarily to fit the combinations recommended. The days and hours at which each study is taught may be found by looking up that study on page 26 (et seq.) of this Bulletin. The title of a group indicates the chief studies of that group.

STUDY GROUPS

1. CLASSICAL. First year: Greek 1 or 7, 8, 9; Latin 1, 2, 3; English 1, 2, 3; either 6 hours in (c) or 3 hours in (c) and 3 hours in (d). Second year: Greek 7, 8, 9 or 10, 11, 12; Latin 4, 5, 6; begin or continue a modern language, a science and a study in Economics, History, Political Science or Sociology. Before choosing work in (3) or (d), read groups 4 to 12.

2. LATIN, MODERN LANGUAGE. First year: Latin 1, 2, 3; French 1 or 2, or German 1 or 4; English 1, 2, 3, either 6 hours in (c) or 3 hours in (c) and 3 hours in (d). Second year: Latin 4, 5, 6; French or German; English; begin or continue a science and a study in Economics, History, Political Science, or Sociology. Before choosing work in (c) or (d), read groups 4 to 12.

3. MODERN LANGUAGES. First year: Begin or continue French and German. *Not more than one new language should be begun in the first year.* English 1, 2, 3; either 6 hours in (c) or 3 hours in (c) and 3 hours in (d). Second year: Continue French and German; begin or continue a science and a study in Economics, History, Political Science or Sociology; add English 8. Before choosing work in (c) or (d), read groups 4 to 12.

4. GENERAL SCIENCE. First year: French 1 or 2 or German 1 or 4; Chemistry 7 or 44; Mathematics 21, 22, 23; English 1, 2, 3,; 3 hours in (d). Second year: A second modern language; a study in Economics, English, History, Political Science or Sociology; one of the following: Astronomy, Chemistry, Physics; one of the following: Botany, Geology, Physiology, Zoology; the remaining time in Mathematics or Science. Students intending to specialize in Chemistry should continue that subject the second year of the course. Those who have Geology in view should take Geology 17 and 11, 12, 13 in their second year.

5. MATHEMATICS, PHYSICS, ASTRONOMY. First year: Mathematics 31, 32, 33, 24; French 1 or 2 or German 1 or 4; English 1, 2, 3; 3 hours in (d). Second year: Mathematics 41, 42, 43; Physics 2; Chemistry 7 or 44; English and a second modern language (German

or French). Third year: Astronomy 1; Physics 12; and either Astronomy 2 or Physics 3; an additional science (3 hours); English or History 2 or 3 hours; German or French unless each has been studied two full years. Instead of Mathematics 31, 32, 33, 24 in the first year, Chemistry 7 or 44 and Mathematics 21, 22, 23 may be chosen, and be followed by Mathematics in the second year.

6. Biological Sciences. First year: French 1 or 2, or German 1 or 4; Chemistry 7 or 44; Botany 21, 22, 23, or Zoology 31; English 1, 2, 3; 3 hours in (d). Second year: Botany; Zoology 31 or 2; Physiology 1; Geology 17 or Mathematics 21, 22, 23, or Physics 11; and a second modern language. Students preparing for medicine should take Zoology 31 in the first year and Zoology 2 and Physiology 1 in the second year.

7. Economics, History. First year: Include European History 1, 2, 3, or Economics 30, 31, 32; English 1, 2, 3; French 1 or 2, or German 1 or 4; 6 hours in (c). Second year: Include Economics 30, 31, 32, or 33; European History 1, 2, 3, or 14; American History 1, or Political Science 1; 4 hours in (b). In each of the third and fourth years include two courses in Economics and one in History, or two in History and one in Economics.

8. History, Political Science, Administration. First year: Include European History, 1, 2, 3, or 14, or American History 1; English 1, 2, 3; 6 hours in (b), including French 1 or 2, or German 1 or 4; 3 hours in (c). Second year: Include Political Science 1 and the course in History not taken the first year, and Economics 33; 3 hours in (c). The student who has not a reading command of French or German should continue the modern language of the first year. In each of the third and fourth years include either two courses in History and one in Political Science, or one course in History and two in Political Science; and in one of these years Economics 42, 43.

9. General Business. First year: Include Economics 30, 31, 32; English 1, 2, 3; Geology 17; Mathematics 21, 22, 23; and one of the following: French 1 or 2; German 1 or 4, or Spanish 1 or 2. Second year: Include Economics 33; English 8; Chemistry 7 or 44, or Physics 11 or 2; American History 1, or European History 1, 2, 3; begin or continue a modern language.

10. Sociology, Philosophy. First year: Include Economics 30, 31, 32; English 1, 2, 3; Physiology 1; Zoology 31; and French 1 or 2, or German 1 or 4. Second year: Include Economics 33; English 8; Physiology 1 and Philosophy 101; American History 1 or European History 1, 2, and 3; begin or continue a modern language.

11. PHILOSOPHY, EDUCATION. First year: Follow suggestions in Study Group 1, 2, or 3, except that only three hours be taken in (c), and that Psychology 1 and Philosophy 101 be taken as the subject in (d). Second year: Include Philosophy 103, 104; Psychology 2; begin or continue a modern language, a science in (c) and a study in Economics, History, Political Science or Sociology.

12. GENERAL LITERATURE. First year: Continue both languages offered for admission: English 1, 2, 3; 3 hours in (c); European History, 1, 2, 3. Second year: Begin or continue a modern language, a science and two courses in History, including European History 14; English 8. Take a course in Philosophy throughout the third year.

THE ARTS-LAW COURSE

A candidate for the degree of Bachelor of Arts while registered in the College of Arts, Philosophy, and Science may also register in the College of Law as a candidate for the degree of Bachelor of Laws, *provided* that at the time of seeking such registration in the College of Law (1) he has 135 term hours to his credit in the College of Arts, Philosophy, and Science, including the requisite optional subjects, and exclusive of the credit hours in Military Drill and Physical Training, and (2) has been a student in the College of Arts, Philosophy, and Science of this University at least one year, and (3) has included (or with the further work in the College of Arts, Philosophy, and Science mentioned in the next paragraph shall complete) sufficient courses to amount to thirty term hours in one or more of the five subjects: American History, European History, Economics, Sociology, and Political Science.

A student so registered in the two colleges must during his first year of double registration complete sufficient further work in the College of Arts, Philosophy, and Science to make his credits in that college aggregate 150 term hours, exclusive of the credit hours in Military Drill and Physical Training. When he has done this and has completed in the College of Law the first year of the course for the degree

of Bachelor of Laws, he will be recommended for the degree of Bachelor of Arts; and when he has completed the second and third years of such course in the College of Law, he will be recommended for the degree of Bachelor of Laws.

Application to enter the combined course must be filed with the Dean of the Arts College before registration day at the beginning of the year in which the student is eligible to enter the combined work.

No credit in the College of Arts, Philosophy, and Science will be given for work done in the College of Law except as above provided, but regular fourth-year students in the former college may by special permission take a limited amount of the work in the College of Law without credit in the College of Arts, Philosophy, and Science.

The work of all students taking studies in the two colleges at the same time is under the jurisdiction of a joint committee, consisting of Professor Denney, Dean of the College of Arts, Philosophy, and Science; Dean of the College of Law; Professors Seibert, Page, and Bruce.

GRADUATE COURSES

A special bulletin devoted to the work of the Graduate School may be obtained on application to the University Editor.

ANNOUNCEMENT OF DEPARTMENTS

AMERICAN HISTORY AND POLITICAL SCIENCE

(Office, Room 207, University Hall)

PROFESSOR KNIGHT, PROFESSOR SPENCER, ASSISTANT PROFESSOR TANNER, MR. DYKSTRA

I AMERICAN HISTORY.

1. POLITICAL HISTORY OF THE UNITED STATES. Three credit hours. Three terms. *M., W., F., at* 8, 9, 11, or 1. Professor KNIGHT, Assistant Professor TANNER, Mr. DYKSTRA.

An outline course covering the period 1600-1900, considering political, economic, and personal aspects of American history from the origins to the present day. The *Epochs* series, by Thwaites, Hart, and Wilson, will be used as text-books, supplemented by outside reading in the works of Fiske, the *American Statesmen* series, and the *American Nation* series. Recitations and reports. This must precede all other courses in American history.

2. THE AMERICAN COLONIES, 1600-1763. Three credit hours. Three terms. *M., W., F., at* 2. Assistant Professor TANNER.

An institutional study of the origin and development of the American colonies, the growth of self-government, and the development of imperial control. Lectures, quiz, and reports.

*4. THE SLAVERY STRUGGLE AND ITS RESULTS, 1800-1900. Three credit hours. Three terms. *M., W., F., at* 11. Given biennially, alternating with Course 6. Professor KNIGHT.

A detailed study of the development of slavery in its connection with and influence upon the constitutional and political history of the country, the rise and fall of parties, the divergence of the sections; the Civil War and its results; the reconstruction of the southern states and the readjustment of society and the states to the new status of the negro. Lectures, quiz, and reports.

6. HISTORY OF AMERICAN DIPLOMACY, 1776-1900. Three credit hours. Three terms. *M., W., F., at* 11. Given biennially, alternating with Course 4. Professor KNIGHT.

A systematic study of the diplomatic history of the United States; the birth, evolution and variations of foreign relations and

*Not given in 1909-1910.

policy, together with a detailed investigation of the circumstances attending the various acquisitions of territory in the process of American expansion. Lectures, quiz, and reports.

*7. Political Parties in the United States, 1789-1900. Two credit hours. Three terms. *Tu., Th., at* 2. Given biennially, alternating with Course 15. Mr. Dykstra.

A detailed study of the rise, progress and decline of the several parties, with special reference to their social, geographical and personal composition, and their effect on legislation and presidential elections. Lectures, quiz, and reports.

*10. Seminary for Research in American History. Two credit hours. Three terms. Time to be arranged. Prerequisite, two courses in American history. Professor Knight.

Each student works on some individual subject of investigation in the field of the department. So far as possible the subjects are so selected as to have a close interrelationship. At the meeting of the seminary the results of the investigations are presented and discussed.

12. The Revolutionary and Critical Period, 1763-1789. Two credit hours. Three terms. *M., F., at* 2. Given biennially. Professor Spencer.

An examination of the constitutional relations of the American colonies to the British empire; of the political, commercial, and personal causes of the revolt, and the process by which they cooperated to bring about separation; of the radical movement and the reaction from it; of the constructive elaboration of written constitutions by the states and for the Union. Lectures, quiz, and reports.

15. The History of the West. Two credit hours. Three terms. *Tu., Th., at* 2. Given biennially, alternating with Course 7. Mr. Dykstra.

A study of the development and organization of the western country; the conditions and character of western migration; the economic, political, and social aspects of the occupation of American territory; and the results on national development. Lectures, quiz, and reports.

16. Constitutional History of the United States. Two credit hours. Three terms. *M., F., at* 10. Mr. Dykstra.

An advanced course considering the constitutional questions

*Not given in 1909-1910.

before the American people during the period from 1787 to 1860; the constitution in the convention, its development and interpretation as influenced by the executive, congress, and the courts in such controversies as those of broad and strict construction, nullification, the bank, and the tariff. Lectures, quiz, and reports.

GRADUATE COURSES

13. RECONSTRUCTION OF THE SOUTH, 1863-1900. Two credit hours. Three terms. *Tu., Th., at* 11. Professor KNIGHT.

An intensive study of the reconstruction era, the legislation of congress and its effects in the South, and the influence of the era upon national history.

14. GRADUATE SEMINARY IN AMERICAN HISTORY AND INSTITUTIONS. Three terms. *Tu., at* 4. Professor KNIGHT.

Some limited field will be made the subject of co-operative study by the seminary. So far as possible the investigation will be in the sources.

II. POLITICAL SCIENCE

1. CONSTITUTIONAL GOVERNMENT. Three credit hours. Three terms. *M., W., F., at* 9 or 1. Prerequisite, American History 1, or European History 1, 2, and 3, or 14, or a substitute acceptable to the department. This course must precede all other courses in political science except 4. Professor SPENCER, Assistant Professor TANNER, Mr. DYKSTRA.

A comparative study of modern governments, American and European; their legislative, executive, and judicial institutions, central and local; the constitutional distribution of powers to governmental organs. Wilson, *The State,* will be used as a text-book, supplemented by readings in Bryce, *The Federalist,* Dicey, and Lowell. Lectures, quiz, and reports.

4. INTERNATIONAL LAW. Two credit hours. Three terms. *Tu., Th., at* 10. Prerequisite, one course in European history and one course in American history. Professor KNIGHT.

A study of the principles of international law in their growth and present status, together with an examination of some of the unsettled questions in the field. Lawrence, *Principles of International Law,* to be used as a text-book, with frequent citations of authorities to be read, and with some leading cases to be thoroughly examined.

*6. THE GOVERNMENT OF COLONIES AND DEPENDENCIES. Two

*Not given in 1909-1910.

2. Astronomy, Geodesy, and Least Squares. Three credit hours. Three terms. *M., W., F., at* 11. Professor Lord and Assistant Professor Manson.

7. Advanced Astronomy. Three to five credit hours. Three terms. Prerequisite, calculus. Professor Lord.

BACTERIOLOGY

(Office, Veterinary Laboratory Building)

PROFESSOR MORREY, ASSOCIATE PROFESSOR MCCAMPBELL, MR. GROSVENOR

These courses in Bacteriology are open to advanced undergraduate and graduate students only. The instructor in charge must be consulted before electing.

5. General Bacteriology. Three to five credit hours. First term. Lectures, *Tu., at* 9 *or M., at* 11; quiz, *Th., at* 9 *or F., at* 11; laboratory, *Tu., Th., or W., F.,* 1 *to* 4. Professor Morrey, Associate Professor McCampbell, Mr. Grosvenor.

Making of media, cultures, staining methods, physiological properties.

7. Pathogenic Bacteria. Three to five credit hours. Second and third terms. Same time as Course 5. Prerequisite, 5. Professor Morrey, Associate Professor McCampbell, Mr. Grosvenor.

10. Water Examination, Sewage Disposal, Water Filtration. Three to five credit hours. Second and third terms. Prerequisite, 5. Lecture, *Tu., at* 11; quiz, *Th., at* 11; laboratory, *M., W.,* 1 *to* 4. Professor Morrey.

11. Bacteriological Chemistry (enzymes). Three to five credit hours. Second and third terms. One lecture, one quiz, two to six hours laboratory work. Prerequisite, 5. Time to be arranged. Professor Morrey.

6. Immunity and Serum Therapy. Three to five credit hours. Three terms. Lectures, *M., F., at* 11; laboratory, to be arranged. Prerequisites, 5 and 7, or equivalents. Associate Professor McCampbell.

Preparation of toxins, antitoxins, vaccines and immune serums.

12. Pathogenic Protozoa. Three to five credit hours. Three terms. Two lectures, two to six hours laboratory work. Prerequisites, 5 and 7, or equivalents. Associate Professor McCampbell.

15. Special Problems in Bacteriological Chemistry. Three to five credit hours. Three terms. Conferences, library, and laboratory work. Prerequisites, 5 and 7, or equivalents. Professor Morrey.

BOTANY

(Office, Botanical Hall)

ASSOCIATE PROFESSOR SCHAFFNER, ASSISTANT PROFESSOR GRIGGS, ASSISTANT PROFESSOR DACHNOWSKI, MISS DETMERS

9. DENDROLOGY. Two or three credit hours. Third term. Time to be arranged. Associate Professor SCHAFFNER, Miss DETMERS.

11. LABORATORY WORK IN ECONOMIC BOTANY. Two to five credit hours. Three terms. Laboratory open daily.

15. EDIBLE AND POISONOUS MUSHROOMS Two credit hours. Laboratory and field work. Three terms. Prerequisite, Course 21 or equivalent. Laboratory open daily. Associate Professor SCHAFFNER, Miss DETMERS.

17. FOREST BOTANY. Three terms. Four credit hours. Lectures *Tu., Th., at* 3. Laboratory, *Tu., Th.,* 1 *to* 3. Prerequisite, 6, 7, 8, or 21. Assistant Professor DACHNOWSKI.

20. FIELD WORK ON LOCAL FLORA. Two credit hours. First or third term. *S.,* all day. Prerequisite, Elementary Botany, Assistant Professor GRIGGS.

21. GENERAL BOTANY. Three credit hours. Three terms. Lecture, *W., at* 9; laboratory, *Tu., Th.,* 8 *to* 10. Text-books: Curtis' Nature and Development of Plants, Schaffner's Laboratory Outlines for General Botany. Associate Professor SCHAFFNER.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

24. PLANT PHYSIOLOGY. Three to five credit hours. Three terms. Laboratory and field work. Prerequisite, Courses 6, 7, 8, or 21, or equivalent. Time to be arranged. Assistant Professor DACHNOWSKI.

The course is an experimental study of the soil, air, and biotic relations of plants. It aims to provide information upon such phases of nutrition, growth, movement, and the tropisms of plants as have an educational value to students in agriculture, forestry, and general biology.

25. ADVANCED MORPHOLOGY. Three to five credit hours. Three terms. Laboratory, *W.,* 1 *to* 4. Other hours to be arranged. Prerequisite, Courses 6, 7, 8, or 21, or equivalent. Assistant Professor GRIGGS.

This course is intended to complete the morphological training begun in the first year. It includes instruction in microtechnique. Whenever possible this course should be accompanied by Course 35.

26. Cytology and Microtechnique. Five credit hours. Three terms. Laboratory open daily. Prerequisite, Course 25. Associate Professor Schaffner.

27. Systematic Botany. Three to five credit hours. Three terms. Laboratory open daily. Prerequisite, Courses, 6, 7, 8, or 21. Associate Professor Schaffner.

32. Minor Investigations. One to three credit hours. Three terms. Prerequisite, Courses 6, 7, 8, or 21. Time to be arranged. Associate Professor Schaffner, Assistant Professor Griggs, Assistant Professor Dachnowski.

35. Evolution of Plants. One credit hour. Lectures. Prerequisite, any one year course in botany. Three terms. *M., at* 4. Associate Professor Schaffner.

36. Seminary.. One credit hour. Three terms. Prerequisite any one year course in botany. Time to be arranged.

This course should be elected only in connection with other advanced work.

FOR GRADUATES

28. Research in Systematic Botany. Five credit hours. Three terms. Laboratory open daily. Prerequisite, Courses 6, 7, 8, or 21. Associate Professor Schaffner.

29. Research in Morphology and Cytology. Three to ten credit hours. Three terms. Laboratory open daily. Prerequisite, 26 or equivalent. Associate Professor Schaffner, Assistant Professor Griggs.

30. Monographic Work. Five to ten credit hours. Three terms. Prerequisite, Course 27, or equivalent. Associate Professor Schaffner.

31. Research in Physiology and Ecology. Five to ten credit hours. Three terms. Prerequisite, Courses 24 or 25, or equivalent. Assistant Professor Dachnowski.

CHEMISTRY

(Office, Chemistry Hall)

PROFESSOR MCPHERSON, EMERITUS PROFESSOR NORTON, PROFESSORS HENDERSON, FOULK, ASSOCIATE PROFESSOR EVANS, ASSISTANT PROFESSOR WITHROW, MR. VOGT, MR. MORRIS, MR. LUCAS, MR. SALE, AND DEPARTMENT FELLOWS

7. Elementary Chemistry. Four credit hours. First and second terms. One lecture, one quiz, six hours laboratory work weekly. Lecture, *M., at* 8 *or* 3; quiz, to be assigned. Laboratory,

M., F., 9 *to* 12; *Tu., Th.,* 9 *to* 12; *M., Tu.,* 1 *to* 4; *Th., F.,* 1 *to* 4; *or W.,* 1 *to* 4, *S.,* 8 *to* 11. Associate Professor EVANS, Assistant Professor WITHROW, Mr. VOGT, Mr. MORRIS, and department fellows.

This course is arranged for students who have not presented chemistry as an entrance requirement. Students taking this course will follow with Course 12, third term.

44. GENERAL CHEMISTRY. Four credit hours. First and second terms. One lecture, one quiz and six hours laboratory work weekly. Lecture, *W., at* 9; quiz, to be assigned; laboratory, same as for Chemistry 7. Professors MCPHERSON, HENDERSON, Associate Professor EVANS, Assistant Professor WITHROW, Mr. VOGT, Mr. MORRIS, and department fellows.

This course is arranged for students who have had an acceptable course in elementary chemistry in a secondary school. Students taking this course will follow with Course 12, the third term.

12. QUALITATIVE ANALYSIS. Four credit hours. Third term. One lecture, one quiz, six hours laboratory work weekly. Prerequisite, Chemistry 7 or 44. Lecture, *M., at* 8 *or* 3; *W., at* 9; quiz, to be assigned; laboratory hours, same as scheduled for Chemistry 7 or 44. Associate Professor EVANS, Assistant Professor WITHROW, Mr. VOGT, Mr. MORRIS, and department fellows.

This is a general introductory course in qualitative analysis.

21. ADVANCED GENERAL CHEMISTRY. Two credit hours. First, second, and third terms. Two lectures weekly. *Tu., Th., at* 11. Prerequisite, Chemistry 7 or 44. Professor HENDERSON.

This course consists of reviews and extends the work in general chemistry.

37. QUALITATIVE ANALYSIS. Four credit hours. First term. One lecture, nine hours laboratory work weekly. Time to be arranged. Prerequisite, Chemistry 7 or 44. Professor FOULK, Mr. SALE.

This is an elementary course in qualitative analysis similar to Course 12.

20. QANTITATIVE ANALYSIS. Four credit hours. First, second and third terms. One lecture, nine hours laboratory work weekly. Lecture, *M., at* 1. Laboratory open forenoons and afternoons. Prerequisite, Chemistry 12 or 37. Professor FOULK, Mr. SALE.

First principles of gravimetric and volumetric analysis. This course must be accompanied by Chemistry 40, except by special permission of the instructor. It is also desirable that it should be accompanied by Chemistry 21.

40. Chemical Problems. One credit hour. First and second terms. *F., at* 11. Professor Foulk.

Extended practice in the solution of chemical problems pertaining to analytical chemistry. This course is arranged to accompany Chemistry 20.

77. The Reading of Chemical Literature. Two credit hours. Second term. Time to be arranged. Prerequisite, German 1. Professor Foulk.

The main object of this course is to afford practice in the rapid reading of German chemical literature, the selections being made with special reference to the technical terms of the science.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

46. Organic Chemistry. Two credit hours. First, second, and third terms. Two lectures weekly. *Tu., Th., at* 10. Prerequisite, Courses 20, and 21, except by special permission of the instructor. Professor McPherson.

General course in organic chemistry. Whenever possible this course should be accompanied by Chemistry 47.

47. Organic Chemistry. Two or three credit hours. First, second, and third terms. Six or nine hours laboratory work weekly. Laboratory open afternoons. This course must be accompanied or preceded by Course 46. Professor McPherson, Mr. Lucas.

Preparation of typical organic compounds.

15. Sanitary Analysis. Four credit hours. Third term. Two lectures, four hours laboratory work weekly. Lectures, *Tu., Th., at* 10. Laboratory open forenoons and afternoons. Prerequisite, Chemistry 20. Professor Foulk.

A study of the methods of sanitary water analysis and the interpretation of results.

48. Qualitative Analysis. Advanced course. Three to five credit hours. Third term. One lecture, six to twelve hours laboratory work weekly. Time to be arranged. Prerequisite, Chemistry 20. Professor Foulk.

Extended work in general qualitative analysis; practice with insoluble substances; use of the spectroscope, etc.

49. Quantitative Analysis. Advanced course. Three to five credit hours. First and second terms. One lecture, four to twelve hours laboratory work weekly. Time to be arranged. Prerequisite, Chemistry 20. Professor Foulk.

Continuation of Chemistry 20; more difficult analytical methods.

30. Physical Chemistry. Three credit hours. First and second terms. Three lectures weekly. *M., W., F., at* 8. Prerequisite,

Chemistry 20, 21; also Course 46, except by special permission of the instructor. Professor HENDERSON.

A general course in the theory of chemistry.

50. PHYSICAL CHEMISTRY. Three credit hours. Third term. Nine hours laboratory work weekly. Time to be arranged with instructor. Prerequisite, Chemistry 30. Professor HENDERSON.

A laboratory course in selected physical-chemical exercises.

32. INDUSTRIAL CHEMISTRY. Four credit hours. First and second terms. Two lectures, six hours laboratory work weekly. *Tu., Th., at* 8. Laboratory, *W., Th.,* 1 *to* 4. Prerequisite, Chemistry, 20, 21, 46, 47. Assistant Professor WITHROW.

Industrial applications of chemistry.

35. RARE ELEMENTS. Three credit hours. Third term. Three lectures weekly. *M., W., F., at* 8. Prerequisite, Chemistry 20 and 21. Professor HENDERSON.

A general study of the more unfamiliar elements.

71. TECHNICAL ANALYSIS. Four credit hours. Third term. One lecture, nine hours laboratory work weekly. Lecture, *Tu., at* 11. Laboratory open all day. Prerequisite, Course 20. Professor FOULK.

The chemical examination of various commercial products.

17. INORGANIC PREPARATIONS. Two or three credit hours. First or second terms. Six to nine hours laboratory work weekly. Laboratory open afternoons. Prerequisite, Courses 20, 21. Professor HENDERSON.

Practice in preparing some typical inorganic substances.

72. APPLIED ELECTRO-CHEMISTRY. Three credit hours. Second and third terms. One lecture, six hours laboratory work weekly. Time to be arranged with instructor. Prerequisite, Courses 20, 21, 46, 47. Assistant Professor WITHROW.

FOR GRADUATES

41. PHYSICAL CHEMISTRY. Three credit hours. First, second, and third terms. Nine hours laboratory work weekly. Time to be arranged. Prerequisite, Chemistry 30. Professor HENDERSON.

An extended course in physical-chemical exercises. While this course extends through the year, students may elect any one or two terms.

29. RESEARCH WORK. Five to ten credit hours. First, second, and third terms. Library and laboratory work. Time arranged with instructor. Professors MCPHERSON, HENDERSON and FOULK, Associate Professor EVANS and Assistant Professor WITHROW.

27. ORGANIC CHEMISTRY. Advanced course. Three to five

credit hours. First, second, and third terms. Library and laboratory work. Time arranged with instructor. Prerequisite, courses 46 and 47. Professor McPherson.

Extended practice in the preparation of typical organic compounds, their purification and analysis.

25. Historical Chemistry. Two credit hours. Second term. Two lectures weekly, *Tu., Th., at* 8. Prerequisite, Courses 30, 46, and 47. Professor Henderson.

This course consists of a general survey of the development of chemistry, particularly of chemical theory. Given in 1909-10, and in alternate years thereafter.

26. Chemical Seminary. One credit hour. First, second, and third terms. *W., at* 11.

Discussion of papers. For advanced and graduate students.

*28. Organic Chemistry. Two credit hours. Third term. Two lectures weekly. Prerequisite, permission of the instructor in charge. Professor McPherson.

This course consists in the presentation and discussion of some important topics in the field of organic chemistry. The course is offered biennially. Subject for 1908-1909, "Fischer's Work on the Proteids." The subjects discussed in this course vary from year to year so that it may be elected by the same student in different years.

73. Inorganic Preparations. Three credit hours. First, second, and third terms. Library and laboratory work. Time to be arranged with instructor. Prerequisite, Course 17. Professor Henderson.

An extended course in the preparation of typical inorganic compounds, including those of the rare elements. The course is arranged for advanced students only. While the course extends through the year, the students may elect any one or two terms.

74. Inorganic Chemistry. Two credit hours. First term. Two lectures weekly. *Tu., Th., at* 8. Prerequisite, Course 30. Professor Henderson.

This course is a course of lectures to advanced students on selected topics. The topics change from year to year so that the course may be elected by the same student in consecutive years. The topic (a) for 1908-09 is "The Phase Rule." For 1909-10 the topic is (b) "The Chemical Aspects of Radioactivity."

75. Analytical Chemistry. Two credit hours. Second term. Two lectures weekly. Time to be arranged. Prerequisite, permission of the instructor. Professor Foulk.

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*Not given in 1909-1910.

This course is arranged for graduate students only. Subject, 1909-10, "Selected Topics Pertaining to Analytical Chemistry." Atomic weights, adsorption, theory of indicators, and precipitation will be discussed.

76. ORGANIC CHEMISTRY. Two credit hours. Third term. Two lectures weekly. Time to be arranged. Prerequisite, permission of the instructor in charge. Associate Professor EVANS.

This course is arranged for graduate students only and is offered biennially, alternating with Course 28. Subject for 1909-10, "Special Chapters in Organic Nitrogen Derivatives; Uric Acid Series; Indigo, Typical Alkaloids, and Dyes." The course may be elected in different years by the same student.

ECONOMICS AND SOCIOLOGY

(Office, Room 211, University Hall)

PROFESSOR HAGERTY, PROFESSOR HAMMOND, PROFESSOR BOWNOCKER, ASSISTANT PROFESSOR MCKENZIE, ASSISTANT PROFESSOR LOCKHART, MR. GEPHART, MR. DORNEY, MR. WALLIS, MR. REEDER

I. ECONOMICS

Students who plan to do considerable work in Economics should take Courses 30, 31, and 32, as introductory to all other courses, and should take at the same time Geology 17. Those who intend to take but one year of work in Economics and Sociology should take Economics 33.

30. INDUSTRIAL AND SOCIAL HISTORY OF ENGLAND. Three credit hours. First term. *M., W., F., at* 8, 9, *or* 2. Open only to first and second-year students. Assistant Professor MCKENZIE and Mr. GEPHART.

Text-book, lectures, and assigned readings.

31. INDUSTRIAL AND SOCIAL HISTORY OF THE UNITED STATES. Three credit hours. Second term. *M., W., F., at* 8, 9, *or* 2. Open only to first and second-year students. Assistant Professor MCKENZIE and Mr. GEPHART.

Text-book, lectures, and assigned readings.

32. COMMERCIAL AND ECONOMIC GEOGRAPHY. Three credit hours. Third term. *M., W., F., at* 8, 9, *or* 2. Open only to first and second-year students. Assistant Professors MCKENZIE, and Mr. GEPHART.

Text book, lectures, and assigned readings.

33. PRINCIPLES OF ECONOMICS. Three credit hours. Three terms. *M., W., F., at* 8, 9, *or* 1. Not open to first-year students.

Should precede all courses in Economics and Sociology except Economics 30, 31, and 32, and Sociology 1. Professor Hammond, Assistant Professor Lockhart, Mr. Gephart, and Mr. Dorney.

Text-book, collateral readings, and individual investigations.

34. Money and Banking. Three credit hours. First term. Prerequisite, Course 33. *M., W., F., at* 2. Assistant Professor Lockhart.

The value of money, monetary systems of the world, currency reform, and theory and history of banking, modern banking systems.

*35. Banking Practice. Three credit hours. Second term. Prerequisite, Course 34. *M., W., F., at* 2. Mr. Dorney.

*36. The Money Market. Three credit hours. Third term. Prerequisite, Course 34. *M., W., F., at* 2. Assistant Professor Lockhart.

37. Industrial Organization. Three credit hours. First term. Prerequisite, Course 33. *M., W., F., at* 9. Professor Hammond.

A study of the development and internal organization of modern manufacturing enterprises with some consideration of the forces determining their location. Lectures, individual reports, and visits of inspection to local plants.

38. Corporation Organization and Finance. Three credit hours. Second term. Prerequisite, Course 33. *M., W., F., at* 9. Professor Hammond.

Methods of corporate organization and management, corporate capitalization and securities. The tendencies toward industrial consolidation, the forms and methods of the modern trust.

51. The Monopoly Problem. Three credit hours. Third term. Prerequisite, Course 38. *M., W., F., at* 9. Professor Hammond.

Monopolistic tendencies in modern industry. The problem of public regulation and control of industrial monopolies.

40. Mercantile Institutions. Three credit hours. First and second terms. Prerequisite, Course 33. *M., W., F., at* 11. Professor Hagerty.

The evolution and organization of mercantile institutions, with a study of the methods of commercial distribution and sale of products, including advertising, selling agencies, produce exchanges, etc.

41. Commercial Credit. Three credit hours. Third term. Prerequisite, Course 40. *M., W., F., at* 11. Professor Hagerty.

Mercantile agencies, credit men's associations, bankruptcy legis-

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*Not given in 1909-1910.

lation, drafts, bills of exchange, bills of lading, and other credit instruments.

42. PUBLIC FINANCE. Two credit hours. First and second terms. Prerequisite, Course 33. *Tu., Th., at* 2.

Public expenditures, revenue and debts, financial organization and administration.

43. FINANCIAL HISTORY OF THE UNITED STATES. Two credit hours. Third term. Prerequisite, Course 33. *Tu., Th., at* 2.

A study of the fiscal and monetary history of the country from colonial times to the present.

*44. TRANSPORTATION. Three credit hours. Three terms. Prerequisite, Course 33. *M., W., F., at* 9. Professor HAMMOND.

The history and public character of transportation; water transportation; railway organization and administration; railway capitalization, rates, pools, mergers, and consolidations; railway commissions and public control; government ownership of railroads.

45. SEMINARY IN ECONOMICS. Two credit hours. Three terms. *Tu.,* 3 *to* 5. Professor HAMMOND.

A course of investigation and research open to graduates and such advanced undergraduates as receive special permission. Recommended to students who have had two or three years work in Economics.

48. ACCOUNTING AND BUSINESS STATISTICS. Two credit hours. Three terms. Prerequisite, Course 33. *Tu., Th., at* 8. Mr. DORNEY.

An introduction to practical accounting, including the analysis and interpretation of business statements, and the use of statistics in commercial and industrial enterprises.

*52. LABOR LEGISLATION. Three credit hours. First term. Prerequisite, Course 33. *M., W., F., at* 1. Professor HAMMOND.

A study of the labor laws of the United States and of the principal foreign countries, with a consideration of their economic and social causes and results.

*39. LABOR ORGANIZATIONS AND EMPLOYERS' ASSOCIATIONS. Three credit hours. Second term. Prerequisite, Course 33. *M., W., F., at* 1. Professor HAMMOND.

The methods by which laborers and employers organize to secure control of the labor market. Trade union policies and methods. Collective bargaining. Industrial arbitration.

*53. REMUNERATION OF LABOR. Three credit hours. Third term. Prerequisite, Course 33. *M., W., F., at* 1. Professor HAMMOND.

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*Not given in 1909-1910.

A study of the wage system, with its attempted modifications. Time, piece, and progressive wages; profit-sharing, labor co-partnership.

54. Insurance. Two credit hours. Three terms. Prerequisite, Course 33. *Tu., Th., at* 10. Mr. Gephart.

Principles of life insurance and its economic and social significance. Kinds of companies, policies, and policy contracts. Public regulation of life insurance companies. Fire, marine, accident, old age, and other forms of insurance.

55. Municipal Economics. Two credit hours. First and second terms. Prerequisite, Course 33. *M., F., at* 10. Assistant Professor Lockhart.

Growth of cities in population and functions. Economic and social activities and the problems of modern cities. Private versus public ownership and operation of public utilities. Experience of American cities compared with that of foreign municipalities.

56. Municipal Finance. Two credit hours. Third term. Prerequisite, Course 55. *M., F., at* 10. Assistant Professor Lockhart.

City expenditures; revenues from public industries, taxes, licenses, special assessments; city indebtedness, its growth and management; municipal statistics and accounts.

*57. American Industries. Three credit hours. Second and third terms.

58. Advanced Accounting and Auditing. Three credit hours. Three terms. Prerequisite, Course 48. *M., W., F., at* 8. Mr. Dorney.

Accounting systems for various types of industrial and financial institutions. The work of the certified public accountant and auditor, their problems and duties.

*59. Economic Resources of the United States. Two credit hours. Three terms. Given in 1908-1909, and thereafter in alternate years. Prerequisite, Geology 17, and Economics 33. *Tu., Th., at* 9. Professor Bownocker.

Metals, fuels, soils, etc., their distribution, abundance and uses; incidental treatment of their origin and geological relations.

60. Economic Bibliography. One credit hour. Three terms. Prerequisite, Course 33. *W., at* 4. Mr. Reeder.

Use of catalogues, magazine indexes, society publications, United States and foreign government publications, state and municipal

*Not given in 1909-1910.

documents, with special reference to economic subjects. Lectures and reference problems.

61. COMMERCE AND COMMERCIAL POLICY. Three credit hours. Three terms. Prerequisite, Course 33. *M., W., F., at* 1. Mr. GEPHART.

A study of the growth of commerce, development of trade routes and trade centers, articles of commerce, commercial policies and their effect on industrial development; commercial institutions and agencies, methods of marketing goods in foreign countries and the settlement of trade balances. Especial attention will be given to the tariff policy of the United States and the extent and character of our foreign trade.

63. BUSINESS LAW. Two credit hours. Three terms. Prerequisite, Course 33. *Tu., Th., at* 9. Mr. DORNEY.

A study of the leading legal principles of interest to the business man to be found in contracts, agency, negotiable instruments, sales, bailments and carriers, partnership, corporations, etc.

II. SOCIOLOGY

These courses are not open to first-year students. It is recommended that Course 1 be preceded by Economics 30, 31, 32, or 33, and Psychology 1, or Zoology 31.

1. PRINCIPLES OF SOCIOLOGY. Three credit hours. Three terms. *M., W., F., at* 8, 9, *or* 3. Professor HAGERTY, Assistant Professor MCKENZIE.

A study of the fundamental principles of sociology. Text-book, lectures, and individual investigations.

*2. HISTORY OF THE FAMILY. Three credit hours. Second term. Prerequisite, Course 1. *M., W., F., at* 8. Mr. WALLIS.

A study of the matrimonial institutions of primitive society and the evolution of the family through the Greek, Roman, Mediæval, and Modern periods.

4. DEPENDENTS AND DEFECTIVES. Three credit hours. First term. Prerequisite, Course 1. *M., W., F., at* 9. Professor HAGERTY.

5. CRIMINOLOGY. Three credit hours. Second term. Prerequisite, Course 4. *M., W., F., at* 9. Professor HAGERTY.

A study of criminality, the cause of crime, means of diminishing crime, prison management and prison reform.

6. ORGANIZED PHILANTHROPHY. Three credit hours. Third term. Prerequisite, Course 5. *M., W., F., at* 9. Professor HAGERTY.

A study of the various institutions or agencies organized to

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*Not given in 1909-1910.

prevent dependency and crime, such as charity organizations, social settlements, the various church agencies, etc.

*8. The Indian. A study of primitive man. Three credit hours. First term. Prerequisite, Course 1. *M., W., F., at* 1. Assistant Professor McKenzie.

*9. The Negro. A study of tropical man. Three credit hours. Second term. Prerequisite, Course 1. *M., W., F., at* 1. Assistant Professor McKenzie.

*10. The Immigrant. Three credit hours. Third term. Prerequisite, Course 1. *M., W., F., at* 1. Assistant Professor McKenzie.

7. Seminary in Sociology. Two credit hours. Three terms. *Tu.,* 3 *to* 5. Open to graduates and advanced undergraduates. Prerequisite, Course 1. Professor Hagerty.

This course is recommended to students who have had one or two years work in Sociology.

11. Social Reform and Socialism. Three credit hours. Three terms. Prerequisite, Course 1, or Economics 33. *M., W., F., at* 1. Assistant Professor McKenzie.

Nineteenth century attempts at social reform, the theory of socialism, and the social function of the church.

*12. Biblical Sociology. Three credit hours. First term. *M., W., F., at* 8. Mr. Wallis.

A study of Old Testiment History, showing the development of the idea of God in its relation to ancient Hebrew society.

*13. Aryan Institutions. Three credit hours. Third term. *M., W., F., at* 8. Mr. Wallis.

A study of the social institutions of the race to which the English-speaking peoples belong.

GRADUATE COURSES

*50. Distribution of Wealth. Three hours. Three terms. *M., W., F., at* 11. Professor Hagerty.

A study of the development of economic theories concerning the distribution of the social product among the producers from the time of the mercantilists to the present time. The works of the leading writers of each period are read and discussed in class.

*14. Advanced Sociology. Two hours. Three terms. *M., W., at* 2. Assistant Professor McKenzie.

A rapid review of social theories from Plato to Spencer, with a more detailed study of the writings of recent sociologists.

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*Not given in 1909-1910.

62. THE STATE IN ITS RELATION TO INDUSTRY AND LABOR. Two hours. Three terms. *M.,* 3 *to* 5. Professor HAMMOND.

A study of the trend of economic and legal thought concerning the part which the state should take in regulating and developing industry and labor. The results of the policy of non-interference and of the later tendency towards regulation in various countries, particularly those of Anglo-Saxon peoples.

47. GRADUATE SEMINARY IN ECONOMICS AND SOCIOLOGY. Graduate students and the instructors in the department will meet regularly for the presentation of the results of investigation, the review of current economic and sociological literature, and the discussion of current problems. Two hours. Three terms. Time to be arranged.

ENGLISH

(Office, Room 116, University Hall)

PROFESSORS DENNEY, TAYLOR, MCKNIGHT, ASSOCIATE PROFESSOR GRAVES, ASSISTANT PROFESSORS DUNCAN, BLANCHARD, LEIGHTON, COOPER, BURNHAM, MR. BECK

1. PARAGRAPH WRITING AND ANALYSIS OF PROSE. Two credit hours. First term. *Tu., Th., or W., F., at* 8; *Tu., Th., at* 9, 10, 11, 1, *or* 3; *M., F., at* 10, 11, *or* 2; *W., F., at* 3. (Course 1 will be repeated in the second term and the third term for the benefit of those who fail, the class meeting Saturdays at 9 a. m., Room 119.) All instructors.

2. EXPOSITORY WRITING. Two credit hours. Second term. Prerequisite, Course 1. Same hours as for Course 1. (Course 2 is also offered in the summer term.) All instructors.

3. BRIEF MAKING AND WRITTEN ARGUMENTATION. Two credit hours. Third term. Prerequisite, Course 1. Same hours as for Course 1. (Course 3 is also offered in the summer term.) All instructors.

3a. PRINCIPLES OF PUBLIC SPEAKING. Two credit hours. First term. *W., F., at* 1 *or* 3. Prerequisite, Courses 1, 2, 3. Assistant Professor BLANCHARD.

3b. DEBATING. Two credit hours. Second and third terms. *W., F., at* 1 *or* 3. Prerequisite, Course 3a. Assistant Professor BLANCHARD.

4. ADVANCED ARGUMENTATIVE WRITING. Two credit hours. First, second, and third terms. *Tu., Th., at* 11. Prerequisite, Course 3. Assistant Professor DUNCAN.

4a. Advanced Debating. Two credit hours. First and second terms. *W., F., at* 2. Prerequisite, Course 3b. Assistant Professor Blanchard.

4b. Extempore Speaking. Two credit hours. Third term. *W., F., at* 2. Prerequisite, Course 3b. Assistant Professor Blanchard.

5. Advanced Composition: Exposition and Criticism. Two credit hours. First term. *Tu., Th., at* 11. Prerequisite, Course 1. Associate Professor Graves.

6. Advanced Composition: Description and Narration. Two credit hours. Second and third terms. *Tu., Th., at* 11. Prerequisite, Course 1. Associate Professor Graves.

43. Versification. Three credit hours. First term. *M., W., F., at* 9. Prerequisite, Course 4 (or 5 and 6), and 8. Associate Professor Graves.

44. Short Story Writing. Three credit hours. Second and third terms. *M., W., F., at* 9. Prerequisite, Course 4 (or 5 and 6), and 8. Associate Professor Graves.

8. General Survey of English Literature. Three credit hours. Three terms. *M., W., F., at* 8, 9, 11, or 3. No prerequisite course. Professor McKnight, Associate Professor Graves, Assistant Professors Duncan, Leighton, Burnham.

45. American Literature. Two credit hour. Three terms. *Tu., Th., at* 8. No prerequisite course. Professor Taylor.

10. The English Lyric (1500 to 1700). Two credit hours. First term. *Tu., Th., at* 9. Prerequisite, Course 8. Assistant Professor Cooper.

11. Poetry From 1700 to 1770. (Exclusive of the drama.) Two credit hours. Second term. *Tu., Th., at* 9. Prerequisite, Course 8. Latin 22 is recommended to students taking this course. Assistant Professor Cooper.

12. Essays and Letters (Bacon to Burke). Two credit hours. Third term. *Tu., Th., at* 9. Prerequisite, Course 8. Assistant Professor Cooper.

13. Burns and Scottish Poetry. Two credit hours. First term. *Tu., Th., at* 2. Prerequisite, Course 8. Assistant Professor Duncan.

17. Byron. Two credit hours. Second term. *Tu., Th., at* 2. Prerequisite, Course 8. Assistant Professor Duncan.

21. Shelley and Keats. Two credit hours. Third term. *Tu., Th., at* 2. Prerequisite, Course 8. Latin 22 is recommended to students taking this course. Assistant Professor Duncan.

14. Burke to DeQuincey. Two credit hours. First term. *Tu., Th., at* 10. Prerequisite, Course 8. Professor Denney.

15. CARLYLE AND RUSKIN. Two credit hours. Second term. *Tu., Th., at* 10. Prerequisite, Course 8. Professor DENNEY.

16. ARNOLD, NEWMAN, AND PATER. Two credit hours. Third term. *Tu., Th., at* 10. Prerequisite, Course 8. Professor DENNEY.

18. WORDSWORTH. Three credit hours. First term. *M., W., F., at* 8. Prerequisite, Course 8. Professor TAYLOR.

19. TENNYSON. Three credit hours. Second term. *M., W., F., at* 8. Prerequisite, Course 8. Professor TAYLOR.

Some attention will be paid to Arnold, Fitzgerald, and the Pre-Raphaelites.

20. BROWNING. Three credit hours. Third term. *M., W., F., at* 8. Prerequisite, Course 8. Professor TAYLOR.

22. THE ENGLISH BIBLE: Epic Forms. Two credit hours. First term. *Tu., Th., at* 3. No prerequisite course. Assistant Professor DUNCAN.

23. THE ENGLISH BIBLE: Lyric Forms. Two credit hours. Second term. *Tu., Th., at* 3. No prerequisite course. Assistant Professor DUNCAN.

24. THE ENGLISH BIBLE: Dramatic Forms. Two credit hours. Third term. *Tu., Th., at* 3. No prerequisite course. Assistant Professor DUNCAN.

26. HISTORY OF THE ENGLISH LANGUAGE. Two credit hours. First term. *Tu., Th., at* 1. No prerequisite course. Professor McKNIGHT.

27. ENGLISH WORDS. Two credit hours. Second and third terms. *Tu., Th., at* 1. No prerequisite course. Professor McKNIGHT.

28. OLD AND MIDDLE ENGLISH. Three credit hours. Three terms. *M., W., F., at* 1. No prerequisite course. Professor McKNIGHT.

31. CHAUCER. Three credit hours. First term. *M., W., F., at* 2. Open only to juniors, seniors, and graduates. Professor McKNIGHT.

33. SPENSER. Three credit hours. Second term. *M., W., F., at* 2. Open only to juniors, seniors, and graduates. Professor McKNIGHT.

37. MILTON. Epic and Prose. Three credit hours. Third term. *M., W., F., at* 2. Latin 22 is recommended to students taking this course. Open only to juniors, seniors, and graduates. Professor McKNIGHT.

35. SHAKESPEARE. Three credit hours. Three terms. *M., W., F., at* 11. Open only to juniors, seniors, and graduates. Professor DENNEY.

36. MODERN ENGLISH DRAMA. Two credit hours. Three terms.

Tu., Th., at 11. Open only to juniors, seniors, and graduates. Proferror Denney.

Beginning with the younger contemporaries of Shakespeare, and extending to the present time.

38. The Novel. Eighteenth Century. Four credit hours. First term. *M., Tu., Th., F., at* 9. Open only to juniors, seniors, and graduates. Professor Taylor.

39. The Novel. First Quarter of Nineteenth Century. Four credit hours. Second term. *M., Tu., Th., F., at* 9. Prerequisite, Course 38. Professor Taylor.

40. The Novel. Second Quarter of Nineteenth Century. Four credit hours. Third term. *M., Tu., Th., F., at* 9. Prerequisite, Courses 38 and 39. Professor Taylor.

49. Seminary. Two credit hours. Three terms. Topic for 1909-1910: English Drama Before Shakespeare. *Tu., at* 4. Open only to seniors and graduates. Must be elected for the year. Professor McKnight.

GRADUATE COURSES

61. Theories of Rhetoric. Topic for 1909-1910: The Lyric. *W., at* 4. Associate Professor Graves.

62. Old and Middle English Philology. Topic for 1909-1910: Metrical Romances. *Th., at* 4. Professor McKnight.

63. Literary Problems. Topic for 1909-1910: The Romantic Movement. *M., at* 4. Professor Denney.

64. Criticism. Topic for 1909-1910: Literature from 1875 to the present. *F., at* 4. Professor Taylor.

ENTOMOLOGY

(See Zoology and Entomology)

EUROPEAN HISTORY

(Office, Room 204, University Hall)

PROFESSOR SIEBERT, ASSISTANT PROFESSOR MC NEAL

1. Mediaeval History to 1300 A. D. Three credit hours. First term. *M., W., F., at* 9, 11, 1, *or* 2. Professor Siebert, Assistant Professor McNeal.

2. European History from 1300 to 1648 A. D. Three credit hours. Second term. *M., W., F., at* 9, 11, 1, or 2. Professor Siebert, Assistant Professor McNeal.

3. European History from 1648 to 1900 A. D. Three credit hours. Third term. *M., W., F., at* 9, 11, 1, or 2. Professor Siebert, Assistant Professor McNeal.

4. CONSTITUTIONAL HISTORY OF ENGLAND. Three credit hours. Three terms. *Tu., Th., F., at* 10. Prerequisite, Course 14, or Courses 1, 2, 3. Professor SIEBERT.

5. HISTORY OF GREECE. Two credit hours. Three terms. *Tu., Th., at* 9. Assistant Professor MCNEAL.

*6. HISTORY OF ROME. Two credit hours. Three terms. *Tu., Th., at* 9. Assistant Professor MCNEAL.

Courses 5 and 6 will be given in alternate years.

7. THE PERIOD OF THE REFORMATION. Three credit hours. First term. *M., W., F., at* 2. Prerequisite, courses 1, 2, and 3, or course 14. Professor SIEBERT.

8. THE FRENCH REVOLUTIONARY AND NAPOLEONIC PERIODS, 1789-1815. Three credit hours. Second term. *M., W., F., at* 2. Prerequisite, courses, 1, 2, and 3, or course 14. Professor SIEBERT.

9. EUROPE IN THE NINETEENTH CENTURY. Three credit hours. Third term. *M., W., F., at* 2. Prerequisite, courses 1, 2, 3, or course 14. Professor SIEBERT.

11. EUROPE AND TURKEY: THE EASTERN QUESTION. Two credit hours. First term. *Tu., Th., at* 11. Prerequisite, Courses 1, 2, and 3, or equivalent. Professor SIEBERT.

10. EUROPE AND AFRICA, INDIA AND AUSTRALIA. Two credit hours. Second and third terms. *Tu., Th., at* 11. Prerequisite, courses 1, 2, and 3, or course 14. Professor SIEBERT.

14. HISTORY OF ENGLAND. Three credit hours. Three terms. *M., W., F., at* 8. Introductory course. Assistant Professor MCNEAL.

*15. NORTHEASTERN EUROPE. Two credit hours. First and second terms. *Tu., Th., at* 11. Prerequisite, courses 1, 2, and 3, or course 14.

*16. EUROPE AND ASIA: THE FAR EASTERN QUESTION. Two credit hours. Third term. *Tu., Th., at* 11. Prerequisite, courses 1, 2, and 3, or course 14.

17. THE DARK AGES, 400 A. D. TO 814 A. D. Three credit hours. First term. *M., W., F., at* 3. Prerequisite, courses 1, 2, 3. Assistant Professor MCNEAL.

18. THE FEUDAL AGE, 814 TO 1250 A. D. Three credit hours. Second term. *M., W., F., at* 3. Prerequisite, courses 1, 2, 3. Assistant Professor MCNEAL.

19. THE AGE OF THE RENAISSANCE, 1250 TO 1500 A. D. Three credit hours. Third term. *M., W., F., at* 3. Prerequisite, courses 1, 2, 3. Assistant Professor MCNEAL.

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*Not given in 1908-1909.

20. History of Germany. Two credit hours. Three terms. Time to be arranged.

21. Seminary in Modern European History. Topic for 1909-1910: England and Canada, 1783-1830. Two credit hours. Three terms. Open only by permission of instructor. Time to be arranged. Professor Siebert.

22. Seminary in Mediaeval History. Reading of the sources of some period in the Middle Age. Two credit hours. Three terms. Open only by permission of instructor. Time to be arranged. Assistant Professor McNeal.

FRENCH

(See Romance Languages)

GEOLOGY

(Office, Room 1, Orton Hall)

PROFESSOR PROSSER, PROFESSOR BOWNOCKER, ASSISTANT PROFESSOR HUBBARD, MR. MORSE

17. Physiography. Three credit hours. Three terms. Open to freshmen and sophomores only. *M., W., F., at* 8 *or* 1; *M., Tu., Th., at* 10. Field trips, Saturday mornings in first and third terms. In the second term, the Monday hour in each sections is replaced by laboratory work, time to be arranged. Professor Bownocker, Assistant Professor Hubbard, Mr. Morse.

Physiographic features of the earth's surface, the ocean, and the atmosphere. Lectures and assigned readings, illustrated with models and lantern views. In the fall and spring terms, three field trips will be made, each trip taking the place of a recitation. In the winter term, the work will consist of two lectures, recitations or quizzes, and one laboratory period per week.

11. Inorganic Geology. Three credit hours. First term. *M., W., F., at* 9. Prerequisite, Chemistry, either in a high school or college (Chemistry 7.) Professor Bownocker.

Introductory course. Petrographical, structural, and dynamical geology. Study of common minerals and rocks. The work is illustrated with lantern views, models, and museum materials.

12. Historical Geology. Three credit hours. Second term. Lectures, *M., W., F., at* 9. Prerequisite, course 11. Professor Prosser.

A general course in paleontological and stratigraphical geology, illustrated by lantern views, maps, and specimens. The develop-

ment of organisms and the classification and distribution of the geological formations, especially those of Ohio, are considered.

13. FIELD GEOLOGY. Three to five credit hours. Third term. Lectures, *M., at* 9. Laboratory, *W., at* 9. Field trips, *S.* Prerequisite, courses 11 and 12. Professor PROSSER and Mr. MORSE.

Field and laboratory study of the geological formations readily accessible from Columbus, and identification of fossils characteristic of different formations. This course is intended to acquaint the student with the ordinary methods of field investigation, and involves the collection and identification of specimens, the measurement of geological sections and the preparation of a report describing the region studied.

[Courses 11, 12, and 13 are considered as forming a general course in geology which is required before advanced work in physiography, historical or inorganic geology. Occasionally course 13 may be counted as graduate work for students entering from other colleges or universities.]

FOR GRADUATES AND UNDERGRADUATES

14. PALEONTOLOGY. Two to five credit hours. Three terms. Laboratory open afternoons, 1 to 4, and on certain days in the morning. Prerequisite, courses 11 and 12. Professor PROSSER and Mr. MORSE.

Careful training in systematic classification which may be used in the philosophical study of the development of plant and animal life, or as a means of becoming acquainted with the fauna and flora that characterize the various geological formations. At first the student devotes some time to conchology, studying recent shells in which the characters used in classification are well preserved, and after this preliminary work, fossils are studied. Fossils afford the most reliable data for identifying and correlating geological formations, and the critical study of faunas is a field especially adapted to independent research. Laboratory, museum, and field work.

15. AREAL GEOLOGY. Two to five credit hours. First and third terms. Field work, *S.* Laboratory open afternoons, 1 to 4. Prerequisite, courses 11, 12, 13, and 14. Professor PROSSER and Assistant Professor HUBBARD.

Instruction in the methods of preparing geological maps and reports for both the Paleozoic and Cenozoic groups. Outcrops are traced in the field and a colored geological map is prepared, together with sections showing the geological structure.

6. ECONOMIC GEOLOGY. Three credit hours. Second term. *M.*,

W., F., at 11. Prerequisite, courses 11, 12, and 13. Professor Bownocker.

The nature of ores, their classification and origin. The metallic ores of the United States, their distribution, abundance, modes of occurrence and origin. The non-metals, coal, oil, gas, clay, lime, cement, building stone, etc. In the discussion of the non-metals, emphasis will be laid on the products of Ohio.

18. Glacial Geology. Three credit hours. Third term. Time to be arranged. Prerequisite, courses 11 or 17. Professor Bownocker.

A study of glacial geology of North America and especially of Ohio. Primarily a field course. Lectures and assigned reading. The preparation of reports on work done in the field will constitute an important part of the course.

19. Petrography. Two to five credit hours. Three terms. Laboratory open afternoons, 1 to 4. Prerequisite, Chemistry 7, Metallurgy 2, and Geology 11. Professor Bownocker.

Optical crystallography, with practical determination of rock-forming minerals, macroscopically and microscopically. Study of the igneous rocks in the hand specimen and thin section. The preparation of thin sections.

21. Advanced Physiography. Three to five credit hours. Three terms. Time to be arranged. Prerequisite, course 17, and courses 11, 12 and 13, or 11, 12 and 13 concurrently. Assistant Professor Hubbard.

Conferences and reports, reviews of literature, directed and independent excursions and laboratory work.

23. Minor Investigations and Current Literature. Two to five credit hours. One or more terms. Time to be arranged. A study of special topics and current literature in geology. Assigned readings, conferences and reports. (a) Historical Geology. Prerequisite, courses 11, 12 and 13 required. Course 17 is recommended. Professor Prosser. (b) Inorganic Geology. Prerequisite, course 6. Professor Bownocker. (c) Physiography. Prerequisite, courses 17, 11, 12 and 13. Assistant Professor Hubbard.

FOR GRADUATES

16. Advanced Historical Geology. Three to five credit hours. Three terms. Time to be arranged. Laboratory open afternoons, 1 to 4. Prerequisite, courses 11, 12, 13, and 14. Professor Prosser.

Advanced work in paleontology and stratigraphical geology. Field work to be arranged with individual students and it is recom-

mended that a part of it be done during the summer vacation under the direction of the instructor in charge.

20. RESEARCH WORK. Three to five credit hours. Three terms. Prerequisite, preceding courses in inorganic or historical geology. Field, laboratory, and library study is offered along three lines. Outline of work and time will be arranged with individual students. (a) STRATIGRAPHY AND PALEONTOLOGY. The investigation of some field problem in stratigraphy with laboratory and library study or of some special subject in paleontology. Professor PROSSER. (b) ECONOMIC GEOLOGY. The investigation of some field problem in petroleum, natural gas, coal, or salt. Professor BOWNOCKER. (c) PHYSIOGRAPHY. Field problems, experimental studies in the laboratory or investigations in the literature. Assistant Professor HUBBARD.

GERMANIC LANGUAGES AND LITERATURES

(Office, Room 317, University Hall)

PROFESSOR RHOADES, ASSOCIATE PROFESSOR EISENLOHR, ASSISTANT PROFESSORS THOMAS AND BUSSE, MR. BUSEY, MISS BARROWS

1. ELEMENTARY GERMAN. Four credit hours. Three terms. *M., Tu., Th., F., at* 9, 10, 11, *or* 2; *Tu., W., Th., F., at* 3.

2. SCIENTIFIC READING. Four credit hours. Third term. *M., Tu., Th., F., at* 9, 10, *or* 2. Prerequisite, course 4 for the first and second terms.

4. INTERMEDIATE GERMAN. Four credit hours. Three terms. *Tu., W., Th., F., at* 8; *M., Tu., Th., F., at* 9, 10, 11, *or* 2. The 9 o'clock period will be dropped in the third term.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

*9. CLASSICAL DRAMA. Three credit hours. Three terms. *M., W., F., at* 2. Prerequisite, Course 4, or equivalent. Not open to freshmen.

*10. MODERN PROSE AND DRAMA. Three credit hours. Three terms. *M., Tu., F., at* 10. Prerequisite, Course 4, or equivalent. Open to freshmen offering four entrance units in German. Assistant Professor THOMAS.

10a. PROSE COMPOSITION. One credit hour. Three terms. Freshmen will elect this in connection with Course 10 or 19. *Th., at* 10.

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*Not given in 1909-1910.

11. Faust. Three credit hours. First and second terms. *M., W., F., at* 11. Must be elected for both terms. Professor Rhoades.

12. Prose Composition and Conversation. Two credit hours. Three terms. *Tu., Th., at* 2 *or* 3. Prerequisite, Course 4. Open only by permission. Associate Professor Eisenlohr.

13. Advanced Prose Composition. Two credit hours. Three terms. *W., F., at* 3. Prerequisite, Course 12. Associate Professor Eisenlohr.

*14. Gothic. One credit hour. Three terms. Time to be arranged. Assistant Professor Thomas.

*15. Old High German. Two credit hours. First and second terms. Time to be arranged. This, with Course 17, forms a natural sequence to 14. Assistant Professor Thomas.

16. Middle High German. Two credit hours. First and second terms. *M., Th., at* 3. Assistant Professor Busse.

*17. Old Saxon. Two credit hours. Third term. Time to be arranged. Assistant Professor Thomas.

19. Recent and Contemporary Writers. Three credit hours. Three terms. *M., Tu., F., at* 10. Prerequisite, Course 4, or equivalent. Professor Rhoades.

26. Seminary. Studies in Modern Literature. Two credit hours. Three terms. *Tu., at* 4. The work is continuous throughout the year and must be so elected in order to count for an advanced degree. Professor Rhoades.

28. German Lyrics and Ballads. Two credit hours. Second and third terms. *W., F., at* 2. Prerequisite, Course 4. Associate Professor Eisenlohr.

30. History of German Literature Since the Reformation. Three credit hours. Third term. *M., W., F., at* 11. Professor Rhoades.

Graduates will present a special study of a single author or movement.

34. General Phonetics. Two credit hours. Third term. *Tu., Th., at* 3. No prerequisite in German, and open to students of language from all departments. Miss Barrows.

35. Goethe's Life and Works. Two credit hours. Three terms. Prerequisite, course 4. *M., Th., at* 2. Assistant Professor Thomas.

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*Given in alternate years; Courses 15 and 17 not offered in 1909-1910.

36. SCHILLER'S LIFE AND WORKS. Two credit hours. Three terms. Prerequisite, course 4. *W., F., at* 3. Miss BARROWS.

*37. LESSING'S LIFE AND WORKS. Two credit hours. Three terms. Prerequisite, course 4. *Tu., Th., at* 3. Associate Professor EISENLOHR.

*38. DRAMAS OF HEINRICH VON KLEIST, GRILLPARZER AND HEBBEL. Two credit hours. Three terms. Prerequisite, course 4. *M., W., at* 2. Assistant Professor BUSSE.

39. VOLKSLIED. Two credit hours. First term. *W., F., at* 2. Prerequisite, course 4; course 28 is its natural sequence. Associate Professor EISENLOHR.

FOR GRADUATES ONLY

18. ROMANTIC WRITERS. Three credit hours. Three terms. Assistant Professor THOMAS.

40. GRADUATE SEMINARY. Two credit hours. Three terms. Professor RHOADES.

In 1909-1910 the subject will be Goethe's Faust.

Attention is directed to course 22 in Latin and to course 20 in European History. Students doing special work in German are particularly recommended to take the latter.

GREEK LANGUAGE AND LITERATURE

(Office, Room 307, University Hall)

PROFESSOR SMITH, PROFESSOR HODGMAN, PROFESSOR ELDEN

1. ELEMENTARY GREEK. Four credit hours. Three terms. *M., Tu., Th., F., at* 11. Professor ELDEN.

7. XENOPHON: The Memorabilia of Socrates; Exercises in Greek Prose. Four credit hours. First term. *M., Tu., Th., F., at* 11. Prerequisite, course 1. Professor SMITH.

8. HERODOTUS. Selections; with Studies in Greek History. Four credit hours. Second term. *M., Tu., Th., F., at* 11. Prerequisite, Course 7. Professor SMITH.

9. HOMER'S ODYSSEY. Selections from Books I-IX. Four credit hours. Third term. *M., Tu., Th., F., at* 11. Prerequisite, Courses 7 and 8. Professor SMITH.

10. LYSIAS: Eight Orations; with Studies in Attic Procedure. Three credit hours. First term. *Tu., Th., F., at* 10. Prerequisite, Courses 7 to 9. Professor SMITH.

11. PLATO: Apology, Crito, and Phædo. Three credit hours.

*Not offered in 1909-1910.

Second term. *Tu., Th., F., at* 10. Prerequisite, Courses 7 to 10. Professor Smith.

12. Homer's Iliad. Three credit hours. Third term. *Tu., Th., F., at* 10. Prerequisite, Courses 7 to 11. Professor Smith.

13. Thucydides: Book I or Book VII. Two credit hours. First term. Time to be arranged. Prerequisite, Courses 7 to 12. Professor Hodgman.

14. Demosthenes: Olynthiacs and Philippics. Two credit hours. Second term. Time to be arranged. Prerequisite, Courses 7 to 12. Professor Hodgman.

15. Greek Lyric Poets, or Theocritus. Two credit hours. Third term. Time to be arranged. Prerequisite, Courses 7 to 12. Professor Hodgman.

16. Euripides: Alcestis, with lectures on the Attic drama. Two credit hours. First term. Time to be arranged. Prerequisite, Courses 7 to 12. Professor Hodgman.

17. Sophocles: Oedipus Tyrannus. Two credit hours. Second term. Time to be arranged. Prerequisite, Courses 7 to 12. Professor Hodgman.

18. Aeschylus: Agamemnon. Two credit hours. Third term. Time to be arranged. Prerequisite, Courses 7 to 12. Professor Hodgman.

19. Epic Poetry. Two credit hours. First term. *W., F., at* 2. Prerequisite, Courses 7 to 12. Professor Smith.

20. Aristophanes: The Birds. Two credit hours. Second term. *W., F., at* 2. Prerequisite, Courses 7 to 12. Professor Smith.

21. Post-Classical Greek. Two credit hours. Third term. *W., F., at* 2. Prerequisite, Courses 7 to 12. Professor Smith.

22. Ancient Art. Lectures on Architecture. Two credit hours. First term. Time to be arranged. No prerequisite course. Professor Smith.

23. Ancient Art. Lectures on Sculpture. Two credit hours. Second term. Time to be arranged. No prerequisite coure. Professor Smith.

24. Ancient Art. Lectures on Sculpture. Two credit hours. Third term. Time to be arranged. No prerequisite course. Professor Smith.

Courses 22, 23, and 24, are biennial, alternating with Courses 32, 33, and 34. They will not be offered again until 1911-1912.

25. Greek Philosophy. Two credit hours. First term. *Tu., Th., at* 2. Prerequisite, Courses 7 to 12. Professor Smith.

26. PLATO. Gorgias or Protagoras. Two credit hours. Second term. *Tu., Th., at* 2. Prerequisite, Courses 7 to 12. Professor SMITH.

27. STUDIES IN NEW TESTAMENT GREEK. Two credit hours. Third term. *Tu., Th., at* 2. Prerequisite, Courses 7 to 12. Professor SMITH.

28. HISTORICAL GRAMMAR. One credit hour. Three terms. Prerequisite, Courses 7 to 12. Professor HODGMAN.

*32. MEDIAEVAL ART. Lectures on Architecture. Two credit hours. First term. No prerequisite course. Professor SMITH.

*33. MEDIAEVAL ART. Lectures on Sculpture. Two credit hours. Second term. No prerequisite course. Professor SMITH.

*34. MEDIAEVAL ART. Lectures on Painting. Two credit hours. Third term. No prerequisite course. Professor SMITH.

These courses, 32, 33, and 34, are biennial, alternating with Courses 22, 23, and 24.

35. PRIVATE LIFE OF THE GREEKS. Lectures. Two credit hours. First term. Time to be arranged. No prerequisite course. Professor SMITH.

36. HISTORY OF GREEK LITERATURE. (Epic, Lyric, and Dramatic Poetry.) Two credit hours. Second term. Time to be arranged. Professor SMITH.

37. HISTORY OF GREEK LITERATURE. (Historians, Philosophers, and Orators.) Two credit hours. Third term. Time to be arranged. Professor SMITH.

Courses 35, 36, and 37 are open to students without a knowledge of Greek.

HISTORY

(See American History and Political Science and European History)

ITALIAN

(See Romance Languages)

LATIN LANGUAGE AND LITERATURE

(Office, Room 307, University Hall)

PROFESSOR DERBY, PROFESSOR HODGMAN, PROFESSOR ELDEN

1. CICERO: De Senectute and De Amicitia, or Selected Letters. Four credit hours. First term. Prerequisite, four units of preparatory Latin. *M., Tu., Th., F., at* 10 *or* 11; *Tu., W., Th., F., at* 2. Professors DERBY, HODGMAN, and ELDEN.

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*Not given in 1909-1910.

2. Livy: Books, 1, 2, 21, or 22, or the Jugurtha of Sallust. Four credit hours. Second term. Prerequisite, course 1. *M., Tu., Th., F., at* 10 *or* 11; *Tu., W., Th., F., at* 2. Professors Derby, Hodgman, and Elden.

3. Horace: Odes. Four credit hours. Third term. Prerequisite, courses 1 and 2. *M., Tu., Th., F., at* 10 *or* 11; *Tu., W., Th., F., at* 2. Professors Debry, Hodgman, and Elden.

4. Pliny or Cicero: Selected Letters. Three credit hours. First term. *M., W., F., at* 9 *or* 3. Professors Derby and Hodgman.

5. Tacitus: Germania and Agricola, or Histories or Catullus. Three credit hours. Second term. *M., W., F., at* 9 *or* 3. Professors Debry and Hodgman.

6. Terence: Phormio; Plautus, Trinummus or Captivi. Three credit hours. Third term. *M., W., F., at* 9 *or* 3. Professors Derby and Hodgman.

7. Martial: Selected Epigrams. Two credit hours. First term. *Tu., Th., at* 3. Professor Derby.

8. Suetonius. Two credit hours. Second term. *Tu., Th., at* 3. Professor Derby.

9. Tacitus: Historiæ or Annales. Two credit hours. Third term. *Tu., Th., at* 3. Professor Derby.

10. The Roman Novel: Petronius; Apuleius. Two credit hours. First term. *Tu., Th., at* 9. Prerequisite, courses 1 to 3, and 4 to 6. Professor Hodgman.

11. Seneca: Madea; Dialogues. Two credit hours. Second term. *Tu., Th., at* 9. Prerequisite, courses 1 to 3, and 4 to 6. Professor Hodgman.

12. Cicero: Tusculan Disputations. Two credit hours. Third term. *Tu., Th., at* 9. Prerequisite, courses 1 to 3, and 4 to 6. Professor Hodgman.

13. Cicero: De Natura Deorum. Two credit hours. First term. *W., F., at* 8. Prerequisite, courses 1 to 3, and 4 to 6. Professor Elden.

14. Epic Poetry. Two credit hours. Second term. *W., F., at* 8. Prerequisite, courses 1 to 3, and 4 to 6. Professor Elden.

15. Horace: Satires. Two credit hours. Third term. *W., F., at* 8. Prerequisite, courses 1 to 3, and 4 to 6. Professor Elden.

*16. Horace: Epistles. Two credit hours. First term. *Tu., Th., at* 3. Professor Derby.

*17. Tacitus: Annals. Two credit hours. Second term. *Tu., Th., at* 3. Professor Derby.

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* Not given in 1909-1910.

*17a. LATE LATIN. Two credit hours. Third term. *Tu., Th., at* 3. Professor DERBY.

20. ROMAN PRIVATE LIFE. One credit hour. Three terms. *M., at* 2. Prerequisite, courses 1 to 3, and 4 to 6. Professor DERBY.

*21. QUIZ AND REVIEW. One credit hour. Three terms. *M., at* 2. Prequisite, courses 1 to 3, and 4 to 6. Professor DERBY.

This course will include brief outlines of Latin Literature, Ancient Geography, the field of Classical Philology, and a review of some less familiar parts of Latin Grammar.

22. ROMAN AND COMPARATIVE LITERATURE. One credit hour. Three terms. *Th.,* at 3. Professor ELDEN.

Lectures on Roman Literature and its influence on modern writers.

Open not only to students of Latin, but also to those without a knowledge of Latin who desire to become acquainted with the broader outlines of Roman literature and its influence upon the literatures of France, Germany and England.

PRIMARILY FOR GRADUATES

*30a. ROMAN PUBLIC LIFE. One credit hour. Three terms. *Th., at* 8. Professor DERBY.

A study, partly from the sources, of the growth of the Roman constitution, and of the methods of Roman administration.

*30. LATIN LITERATURE. One credit hour. Three terms.

*31. LATIN PHILOLOGY. Two credit hours. Three terms. *Tu., Th., at* 3.

32. HISTORICAL LATIN GRAMMAR. Sounds and inflections. One credit hour. Three terms. *Th., at* 10. Professor HODGMAN.

This course treats of pronunciation, ablaut, vowel and consonant changes—especially vowel weakening—accent, inflection, and other similar topics essential to the understanding of the principles which govern the development of the Latin language.

33. HISTORICAL LATIN GRAMMAR. Syntax. One credit hour. Three terms. *Tu., at* 9. Professor ELDEN.

Lectures on the problems connected with the origin and development of certain constructions in Latin syntax, a treatment along historical lines of the syntactic uses of the cases, moods, and tenses.

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*Not given in 1909-1910.

Courses 32 and 33 are deemed essential for those who make Latin a major or minor subject of study.

34. Advanced Latin Composition.

*35. Pro-Seminary. Textual criticism; interpretation and criticism of Latin authors.

36. Roman Religion. One credit hour. Three terms. Lectures, and Fasti of Ovid. Professor Hodgman.

*37. Legal Latin.

A study of the early Roman law, as given in Bruns' Fontes, and similar treatises; or of the Institutes of Justinian.

38. Mediaeval Latin.

39. The Elements of Epigraphy. Two credit hours. Three terms. *Tu., Th., at* 11. Professor Derby.

40. Palaeography. One credit hour. Three terms.

*42. Roman Satire. Open to graduates and advanced undergraduates. Two credit hours. Three terms. Professor Elden.

Lectures and recitations: The history and development of Roman satire. The authors studied will be Horace, Juvenal, and Persius, together with the fragments of the earlier satirists.

Special topics related to the subjects named above may be pursued under supervision of the instructor, and graduate students, with consent of the department, may earn an additional credit hour in any course primarily for graduates. Such lines of reading and individual investigation will usually be supplementary to the regular graduate courses.

MATHEMATICS

(Office, Room 314, University Hall.)

Professor Bohannan, Professor McCoard, Professor Swartzel, Professor Kuhn, Associate Professor Arnold, Associate Professor Rasor, Assistant Professor Preston, Assistant Professor Bareis, Assistant Professor Morris, Mr. West

21. College Algebra. Three credit hours. First term. *M., W., F., at* 9, 11, *or* 1. Professor Bohannan, Professor McCoard, Associate Professor Rasor, Assistant Professor Morris.

22. Plane Trigonometry. Three credit hours. Second term. *M., W., F., at* 9, 11, *or* 1. Professor Bohannan, Professor McCoard, Associate Professor Rasor, Assistant Professor Morris.

23. Elementary Analytical Geometry and Calculus. Three

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* Not given in 1909-1910.

credit hours. Third term. *M., W., F., at* 9, 11, *or* 1. Prerequisite, course 22. Professor BOHANNAN, Professor MCCOARD, Associate Professor RASOR, Assistant Professor MORRIS.

24. PROBLEMS ON ALL PAST WORK. One credit hour. Three terms. *F., at* 10. Associate Professor ARNOLD.

28. ANALYTICAL GEOMETRY AND CALCULUS. Three credit hours. Three terms. Prerequisite, courses 21, 22, 23, or 31, 32, 33. Associate Professor RASOR.

31. COLLEGE ALGEBRA. Five credit hours. First term. *M., Tu., W., Th., F., at* 8, 9, 11, 1, *or* 2. Professors BOHANNAN, MCCOARD, SWARTZEL, KUHN, Associate Professors ARNOLD, RASOR, Assistant Professors PRESTON, BAREIS, MORRIS, Mr. WEST.

32. PLANE TRIGONOMETRY. Five credit hours. Second term. *M., Tu., W., Th., F., at* 8, 9, 11, 1, *or* 2. Professors BOHANNAN, MCCOARD, SWARTZEL, KUHN, Associate Professors ARNOLD, RASOR, Assistant Professors PRESTON, BAREIS, MORRIS, MR. WEST.

33. ANALYTICAL GEOMETRY. Five credit hours. Third term. *M., Tu., Th., F., at* 8, 9, 11, 1, *or* 2. Prerequisite, course 22 or 32. Professors BOHANNAN, MCCOARD, SWARTZEL, KUHN, Associate Professors ARNOLD, RASOR, Assistant Professors PRESTON, BAREIS, MR. WEST.

41, 42, 43. CALCULUS. Five credit hours. Three terms. *M., Tu., W., Th., F., at* 8, 11, *or* 1. Prerequisite, courses 21, 22, 23, or 31, 32, 33. Professors BOHANNAN, MCCOARD, SWARTZEL, KUHN, Associate Professors ARNOLD, RASOR, Assistant Professors BAREIS, MORRIS.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite, Differential and Integral Calculus

34. DETERMINANTS. Three credit hours. First term. Assistant Professor BAREIS.

35. THEORY OF EQUATIONS. Three credit hours. Second and third terms. Professor MCCOARD.

36, 37. PLANE AND SOLID ANALYTICAL GEOMETRY. Three credit hours. Plane Analytics will be studied the first term and Solid Analytics the second and third terms. Associate Professor RASOR.

38. ADVANCED CALCULUS. Three credit hours. First, second, and third terms. Assistant Professor MORRIS.

39. DIFFERENTIAL EQUATIONS. Three credit hours. First, second and third terms. Professor SWARTZEL.

40. PROJECTIVE GEOMETRY. Three credit hours. First and second terms. Professor BOHANNAN.

44. Non-Euclidian Geometry. Three credit hours. Third term. Professor Kuhn.

45. Modern Higher Algebra. Three credit hours. First, second, and third terms. Associate Professor Arnold.

*47. The Mathematics of Insurance and Investments. Two credit hours. Three terms.

48. The Theory of Statisitics. Two credit hours. Three terms. This course alternates with 34. Professor Kuhn.

FOR GRADUATES

49. (a) Infinite Series and Products; (b) The Functions of a Real Variable; (c) Calculus of Varations; (d) The Theory of Functions of a Complex Variable; (e) Elliptic Functions; (f) Potential Function; (g) Fourier's Series and Spherical Harmonics; (h) Groups; (i) Theory of Numbers; (j) Higher Plane Curves; (k) Invariants; (l) Differential Geometry; (m) The Mathematical Theory of Electricity and Magnetism; (n) The Mathematical Theory of Light; (o) The Mathematical Theory of Sound; (p) The History of Mathematics. Professors Bohannan, McCoard, Swartzel, Kuhn, Associate Professors Arnold, Rasor, Assistant Professors Bareis, Morris.

MILITARY SCIENCE AND TACTICS

(Gymnasium and Armory.)

CAPTAIN G. L. CONVERSE, U. S. A., RET.

The Military Department is open five days during each week of each term. Required of all students first and second year, unless excused by the Military and Gymnasium Board.

1. Military Drill. One credit hour. First and third terms. *M., Tu., W., at* 11 *or* 4.

2. Military Drill. One credit hour. Second term. Drill Regulations, *M., Tu., W., at* 11 *or* 4; Gallery Practice, *M., Tu., W., Th.,* 1 *to* 5.

PHILOSOPHY

(Office, Room 321, University Hall.)

PROFESSOR SCOTT AND PROFESSOR DAVIES.

100. Elements of Philosophy. Three credit hours. First and second terms, followed in third term by Philosophy 101 (Logic). Open to students in the first and second years. *M., W., F., at* 11. Professor Scott.

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*Not given in 1909-1910.

101. INTRODUCTORY LOGIC. Three credit hours. Third term. *M., W., F., at* 11. Professor SCOTT.

This course with Philosophy 100 or Psychology 1 forms a continuous course for a year. Recitations and lectures, with practical work in the analysis and criticism of reasoning processes.

103. ETHICS. Two credit hours. Three terms. *Tu., Th., at* 11. Professor SCOTT.

106. INTRODUCTION TO PHILOSOPHY. Three credit hours. Three terms. *M., W., F., at* 2. Prerequisite, Philosophy 103; or Philosophy 100 and 101; or Psychology 1 and Philosophy 101; or Psychology 1 and Philosophy 152. Professor SCOTT.

107. THEORY OF KNOWLEDGE. Three credit hours. First and second terms. *M. W. F., at* 3. Prerequisite, Philosophy 106. Professor SCOTT.

108. METAPHYSICS. Three credit hours. Third term. *M., W., F., at* 3. Prequisite, Philosophy 106 and 107. Professor SCOTT.

112. ADVANCED ETHICS. Two credit hours. Three terms. *Tu., Th,. at* 3. Prerequisite, Philosophy 103. Professor SCOTT.

115. AESTHETICS. Two credit hours. Three terms. *Tu., Th., at* 2. Open to first year students. Professor DAVIES.

118. PHILOSOPHY OF SCIENCE. Two credit hours. Three terms. *Tu., Th., at* 2. Prerequisite, one year of elementary work, including Philosophy 101. Alternative with Philosophy 119. Professor SCOTT.

119. PHILOSOPHY and RELIGION. Two credit hours. Three terms. *Tu., Th., at* 2. Prerequisite, at least one year of elementary work. Alternative with Philosophy 118. Professor SCOTT.

123. PHILOSOPHY OF MIND. Two credit hours. Three terms. *Tu., Th., at* 11. Prerequisite, Philosophy 152, and Psychology 1, or Philosophy 106. Professor DAVIES.

141. ETHICAL SEMINARY. Two credit hours. Three terms. Prerequisite, one year of elementary work and Philosophy 112. Professor SCOTT.

142. PHILOSOPHICAL SEMINARY. Two credit hours. Three terms. Prerequisite, one year of elementary work and Philosophy 106. Professor DAVIES.

151. HISTORY OF ANCIENT PHILOSOPHY. Three credit hours. First term. *M., W., F., at* 2. Open to first year students. Professor DAVIES.

152. HISTORY OF MODERN PHILOSOPHY. Three credit hours. Second and third terms. *M., W., F., at* 2. Open to first year students. Prerequisite, Philosophy 151. Professor DAVIES.

155. HISTORY OF CHRISTIAN PHILOSOPHY. Three credit hours.

Three terms. Time to be arranged. Open to first year students. Professor Davies.

157. Plato. Two credit hours. Three terms. *Tu., Th., at* 3. Prerequisite, one year of elementary work, including Philosophy 151. Alternative with Philosophy 159. Professor Davies.

159. Aristotle. Two credit hours. Three terms. *Tu., Th.,* at 3. Prerequisite, one year of elementary work, including Philosophy 151. Alternative with Philosophy 157. Professor Davies.

161. Descartes to Kant. Three credit hours. Three terms. *M., W., F., at* 11. Prerequisite, one year of elementary work, including Philosophy 152. Professor Davies.

166. Kant to Hegel. Three credit hours. Three terms. *M., W., F., at* 11. Prerequisite, one year of elementary work, including Philosophy 152. Professor Davies.

168. Recent and Current Philosophy. Three credit hours. Three terms. *M., Th., F., at* 10. Prerequisite, one year of elementary work, including Philosophy 152. Professor Scott.

PHYSICAL EDUCATION FOR MEN.

(The Gymnasium.)

DR. WINGERT, MR. KIBLER

1. Physical Education, consisting of a graded systematic course of healthful body-building exercise and recreation, is required two hours per week during the first year of each student's residence at the University, or until he has successfully completed three terms of this work.

All first year men are required to take a physical examination at opening of the Fall term.

PHYSICAL EDUCATION FOR WOMEN.

(The Gymnasium.)

MISS SEARING.

1. Gymnasium. One credit hour. Three terms.

A physical examination is made of all women in the department by the director during the early part of the fall term. Well regulated physical exercises are given to meet the needs of every student; four hours per week during first year of student's residence at University is required. *M., Tu., Th., F., at* 9, 10, *or* 11; *W.,* 9 *or* 11.

2. Gymnasium. One credit hour. Three terms. Four hours per week required of all young women during second year of course. *M., Tu., Th., F.,* 9, 10 *or* 11; *W.,* 9 *or* 11.

PHYSICS

(Office, Room 24, Physics Hall.)

PROFESSOR COLE, PROFESSOR THOMAS, ASSOCIATE PROFESSOR KESTER, ASSISTANT PROFESSOR EARHART, ASSISTANT PROFESSOR BLAKE, DR. BAILEY, MR. SHEARD, MR. KELLOGG, MR. BARNES, MR. NUSBAUM.

2. GENERAL PHYSICS. Three credit hours. Three terms. *M., W., at* 9, *or Tu., Th., at* 11. One two-hour period experimental work and one quiz to be arranged. Prerequisite, Mathematics 21, 22, 23 or 31, 32, 33. Professor COLE, assisted by seven others.

4. ELECTRICITY AND MAGNETISM. Three credit hours. First term. *M., Tu., Th., at* 10. Professor COLE.

11. GENERAL PHYSICS. Three credit hours. Three terms. Lecture, *W., at* 11 *or* 2. Laboratory, *Tu., Th.,* 8 *to* 10 *or Th., F.,* 2 *to* 4. Assistant Professor BLAKE.

12. LABORATORY. Three to five credit hours. Three terms. *M., Tu., W.,* 1 *to* 4. Prerequisite, Course 2 or 11 (or may accompany Course 2). Associate Professor KESTER.

18. THE PRODUCTION AND USE OF ELECTRIC CURRENTS. Theory and practice. Three credit hours. Third term. Time to be arranged. Prerequisite, course 11 or some additional general laboratary course desirable. Professor THOMAS.

A non-technical course in dynamo currents, for teachers and for general science students.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

13. ADVANCED LABORATORY. Three to five credit hours. Three terms. Prerequisite, Course 2 or 11, and Course 12. Professor COLE, Associate Professor KESTER, Assistant Professor EARHART, Assistant Professor BLAKE.

*14a. ADVANCED MECHANICS AND MOLECULAR PHYSICS. Three credit hours. Three terms. *Tu., W., Th., at* 4. Prerequisite, Physics 2 or 11; Calculus precedes or accompanies. First term, Mechanics, Associate Professor KESTER; second term, Molecular Physics and Heat; third term, Electronic Theory, Assistant Professor EARHART.

This course alternates with 14c.

14c. ADVANCED LIGHT AND ELICTRICITY. Three credit hours. Three terms. *Tu., W., Th., at* 4. Prequisite, Physics 2 or 11; Calculus precedes or accompanies. First term, Light, Mr. SHEARD; second term, Electricity and Magnetism, Assistant Professor EAR-

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*Not given in 1909-1910.

hart; third term, Radioactivity, Professor Cole. This course alternates with 14a.

Courses 14a and 14c together constitute a two-year cycle, moderately advanced, covering the whole subject of Physics.

16. Physical Seminary. One credit hour. Three terms. Prerequisite, a year of college work in physics. Professor Cole.

*21. Theoretical Physics. An advanced course in Light. Two hours. Three terms. Prerequisite, Physics 2, and Mathematics 41, 42, 43, or equivalents. Dr. Bailey.

28. The Theory and Practice of Electrical Measurements. Three to five hours. Three terms. Prerequisite, Physics 2, or equivalent, a course in Electrical Measurement, and Mathematics 41, 42, 43, or equivalent. Professor Thomas.

PRIMARILY FOR GRADUATES

22. Theory of Oscillations With Their Applications to Wireless Telegraphy. Three hours. Three terms. Physics 2, and Mathematics 41, 42, 43, or equivalents. Assistant Professor Blake.

23. Potential Function With Special Reference to Electricity and Magnetism. Three credit hours. Three terms. Prerequisites, Physics 2, and Mathematics 41, 42, 43, or equivalents. Assistant Professor Blake.

24. Conduction of Electricity Through Metals from the Standpoint of the Electronic Theory. Three credit hours. Three terms. Prerequisites, Physics 2, and Mathematics 41, 42, 43, or equivalents. Assistant Professor Blake.

25. Theoretical Mechanics. Three credit hours. Three terms. Prerequisites, Physics 2, and Mathematics 41, 42, 43, or equivalents. Assistant Professor Blake.

26. Thermodynamics and Electrolytic Conduction. Two credit hours. Three terms. Prerequisites, Physics 2, and Mathematics 41, 42, 43, or equivalents. Associate Professor Kester.

Electrolytic Conduction in the third term follows the deduction of the laws of dissociation in the second term.

*27. Theory of Electricity and Magnetism. Three credit hours. Three terms. Prerequisites, Physics 2, and Mathematics 41, 42, 43, or equivalents. Associate Professor Kester.

Courses 25, 26, 21 and 27 together form an advanced two-year cycle, covering the whole ground of physics.

15. Research Laboratory. Three to five credit hours. Three

*Not given in 1909-1910.

terms. Prerequisites, two years of laboratory work in physics. Professor COLE, Professor THOMAS, Associate Professor KESTER, Assistant Professor EARHART, Assistant Professor BLAKE.

POLITICAL ECONOMY

(See Economics and Sociology.)

POLITICAL SCIENCE

(See American History and Political Science.)

PSYCHOLOGY

(Office, Room 404, University Hall.)

PROFESSOR MAJOR, PROFESSOR HAINES, PROFESSOR DAVIES

1. GENERAL PSYCHOLOGY. Introductory Course. Three credit hours. First and second terms. *M., W., F., at* 11 *or* 2. Professor MAJOR, Professor HAINES.

This course, or the equivalent, is required for admission to all other courses in the department of Psychology. Lectures, demonstrations, and recitations. (For third term's work students may elect Philosophy 101, or Psychology 1a.)

1a. ELEMENTARY EXPERIMENTS AND EXERCISES IN PSYCHOLOGY. Three credit hours. Third term. *M., W., F., at* 11 *or* 2. Professor MAJOR, Professor HAINES.

3. EXPERIMENTAL PSYCHOLOGY. Three credit hours. Three terms. Lecture, *Tu., at* 1; Laboratory, *Tu.,* 2 *to* 4, and *Th.,* 1 *to* 3. Prerequisite, Psychology 1. Professor HAINES.

An experimental study of two or three sense fields, of attention, of reaction time, of geometric optical illustions, etc., for the first and second terms. In the third term each member of the course will take a small problem for investigation.

*4. MENTAL DEVELOPMENT. Two credit hours. Three terms. Professor MAJOR.

This course is designed (1) to describe the characteristic features of the child mind, (2) to study the principles and empirical data of the development of the individual human mind.

7. ABNORMAL PSYCHOLOGY. Three credit hours. Second and third terms. *M., W., F., at* 1. Prerequisite, Psychology 1. Professor HAINES.

Psychological studies of nervous and mental diseases by lectures, recitations, and clinics.

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*Not given in 1909-1910.

8. Animal Psychology. Three credit hours. First term. *M., W., F., at* 1. Prerequisite, Psychology 1. Professor Haines.

A systematic tracing of the evolution of mind by studying the senses, memory, accommodation, etc., in a graded series of animal forms.

10. Social Psychology. Three credit hours. First term. *M., W., F., at* 3. Prerequisite, Psychology 1. Professor Haines.

The social factor in the development of personality, and the mental process involved in social development, including such topics as suggestion, imitation, invention, sympathy, modesty, the socially unfit, and the genius.

11. Folk Psychology. Three credit hours. Second term. *M., W., F., at* 3. Professor Haines.

The psychic factors involved in group activities, such as the play of children, art (especially of savages and barbarians), mob phenomena, family life, and ethnic groups.

12. The Psychology of Reasoning. Three credit hours. Third term. *M., W., F., at* 3. Professor Haines.

An inductive study of the method of thinking as shown by the history of science, and of the method of mental accommodation and invention in primittive man and animals.

14. Advanced Psychology. Two credit hours. Three terms. Time to be arranged. Prerequisite, Psychology 1. Professor Davies.

This course includes a discussion of the methods of Psychology, and a detailed consideration of the main psychological concepts—feeling, conation, perception, imagination, etc., both in themselves and in their relation to one another.

16. Individual Psychology. Two credit hours. Three terms. *Tu., Th., at* 2. Professor Major.

A study of individual variations in mental capacity and development.

20. General Psychology. Advanced Course. Three credit hours. Three terms. *M., W., F., at* 9. Professor Major.

This course is open to students who have completed Psychology 1, or the equivalent, and who wish to make a more intensive study than is practical in an introductory course, of certain topics selected from the field of general psychology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

31. Research in Experimental Psychology. Two credit hours or more. Three terms. Professor Haines.

The investigation of problems in any field of Psychology by the

aid of the experimental method. The student selects a problem in consultation with the instructor, who carefully considers the student's interests. Members of the laboratory assist each other as observers.

32. SEMINARY IN PSYCHOLOGY. Two to five credit hours. Three terms. Time to be arranged. Professor MAJOR, Professor HAINES.

This course is open only to advanced students in philosophy, psychology, or education.

33. GRADUATE COURSES IN PSYCHOLOGY. Three to ten credit hours. Three terms. Professor MAJOR, Professor HAINES.

These courses are to meet the needs of individual graduate students who are pursuing a major or minor study in the department of Psychology.

RHETORIC AND ENGLISH LANGUAGE.

(See English.)

ROMANCE LANGUAGES AND LITERATURES.

(Office, Room 305, University Hall.)

PROFESSOR BOWEN, PROFESSOR BRUCE, ASSSOCIATE PROFESSOR INGRAHAM, ASSISTANT PROEFSSOR PEIRCE, MR. EWINGTON, DR. FALORSI.

I. FRENCH.

1. ELEMENTARY FRENCH. Four credit hours. Three terms. Grammar: Thieme and Effinger's, or equivalent. Reader: Aldrich and Foster's, or Bowen's First Scientific. Historical and narrative prose; one or more prose comedies. *M., Tu., Th., F., at* 9, 10, 11, *or* 2; *Tu., W., Th., F., at* 3. All instructors in the department teach one or more sections of this course.

Stress laid upon the acquisition of a correct pronunciation, after which the energy of the student is directed toward the attainment of a full and accurate reading knowledge of the language. Grammar and composition made to contribute to this end. Sight reading emphasized.

2. MODERN FRENCH LITERATURE. Four credit hours. Three terms. *M., Tu., Th., F., at* 10 *or* 11. Prerequisite, Course 1, or equivalent. Professor BRUCE, Assistant Professor PEIRCE, Mr. EWINGTON.

The study of the literature as such now taken up. The work of the year includes the following subjects: (1) Contes; (2) The Novel (Balzac or Hugo); (3) Lyric Poetry, (Bowen's Modern

French Lyrics); (4) Romantic drama (Hugo). Prose composition. Systematic attention is given to syntax and idiom. Lectures supplement the work. Private reading required.

3. Science Reading. Four credit hours. Third term. *M., Tu., Th., F., at* 10. Prerequisite, course 2, first and second terms. Assistant Professor Peirce.

A course of rapid reading introductory to the vocabulary of scientific literature.

*4. French Comedy of the Seventeenth Century. Three credit hours. First term. *M., W., F., at* 8 *or* 11. Given biennially, alternating with course 16. Prerequisite, courses 1 and 2. Professor Bowen, Assistant Professor Peirce.

Lectures on the growth of French Comedy, with work centering upon Molière and Regnard. Collateral reading.

*5. French Tragedy. Three credit hours. Second term. *M., W., F., at* 8 *or* 11. Given biennially, alternating with course 17. Prerequisite, courses 1 and 2. Professor Bowen, Assistant Professor Peirce.

Corneille, Racine, and Voltaire. Critical study of Le Cid, Horace, Andromaque, Esther, and Zaïre. Collateral reading. Lectures.

*6. Seventeenth Century Prose. Three credit hours. Third term. *M., W., F., at* 8 *or* 11. Given biennially, alternating with course 18. Prerequisite, courses 1 and 2. Professor Bowen, Assistant Professor Peirce.

Critical study of Descartes, Pascal, La Bruyēre and others. Warren's Selections.

7. Advanced Prose Composition. One credit hour. Three terms. *Tu., at* 8 *or* 11. Prerequisite, courses 1 and 2. Professor Bowen, Assistant Professor Peirce.

Cameron's French Composition, followed by other selections. Dictation. Conversation.

*8. Prose of the Romantic Period. Two credit hours. First term. *Tu., Th., at* 9. Given biennially, alternating with course 11. Prerequisite, courses 1 and 2. Professor Bruce.

*9. Recent French Prose. Two credit hours. Second term. *Tu., Th., at* 9. Given biennially, alternating with course 12. Prerequisite, courses 1 and 2. Professor Bruce.

Rapid reading, with lectures, the work centering upon such writers as Bazin, Daudet, Loti, and Zola.

*10. Practice in Speaking and Writing French: Based on

*Not given in 1909-1910.

Daudet's stories. Two credit hours. Third term. *Tu., Th., at* 9. Students wishing to elect this course must have the consent of the instructor in charge. Given biennially, alternating with course 13. Professor BRUCE.

11. FRENCH TRAVEL WRITERS. Two credit hours. First term. *Tu., Th., at* 9. Given biennially, alternating with course 8. Prerequisite, courses 1 and 2. Professor BRUCE.

Scenes of travel from Gautier, Hugo, and Dumas. Gautier's Voyage en Espagne (Clarendon Press) and others.

12. EIGHTEENTH CENTURY PROSE. Two credit hours. Second term. *Tu., Th., at* 9. Given biennially, alternating with course 9. Prerequisite, courses 1 and 2. Professor BRUCE.

Selections from Voltaire (ed. Cohn and Woodward), or others.

13. ADVANCED CONVERSATIONAL PRACTICE: Based on stories of Coppée and Maupassant. Two credit hours. Third term. *Tu., Th., at* 9. Students wishing to elect this course must have the consent of the instructor in charge. Given biennially, alternating with course 10. Professor BRUCE.

*14. FRENCH SEMINARY A. Two credit hours. Three terms. *M.,* 3 *to* 5. Given biennially, alternating with course 15. Prerequisite, courses 1, 2, 4, 5, 6, and 7 or an equivalent. Professor BOWEN.

Studies in specific literary fields. The subject for 1910-1911 will be announced later.

15. FRENCH SEMINARY B. Two credit hours. Three terms. Given biennially, alternating with course 14. Prerequisite, courses 1, 2, 4, 5, 6, and 7, or an equivalent. Professor BOWEN.

Studies in Old French (with emphasis of la Chanson de Roland) and in the language and writers of the Sixteenth Century (Darmesteter et Hatzfeld, Morceaux choisis); special consideration of Montaigne.

16. FRENCH COMEDY OF THE EIGHTEENTH CENTURY. Three credit hours. First term. *M., W., F., at* 8 *or* 11. Given biennially, alternating with course 4. Prerequisite, courses 1 and 2. Professor BOWEN, Assistant Professor PEIRCE.

Lectures on the growth of French Comedy, with work centering upon Marivaux and Beaumarchais. Olmsted's edition of Marivaux's Comedies, with le Barbier de Séville and collateral reading.

17. FRENCH SOCIETY IN THE SEVENTEENTH CENTURY. Three credit hours. Second term. *M., W., F., at* 8 *or* 11. Given biennially, alternating with course 5. Prerequisite, courses 1 and 2. Professor BOWEN, Assistant Professor PEIRCE.

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*Not given in 1909-1910.

Crane's Selections; with lectures. Special reference to the Precieux Movement. Collateral reading.

18. Precursors of French Romanticism. Three credit hours. Third term. *M., W., F., at* 8 *or* 11. Given biennially, alternating with course 6. Prerequisite, courses 1 and 2. Professor Bowen, Assistant Professor Peirce.

Rousseau, Chateaubriand (Bowen's Itala and René), and Madame de Staël. With lectures.

II. ITALIAN.

1. Elementary Italian. Two credit hours. Three terms. Grammar (Grandgent's or Young's), and Bowen's Italian Reader. Modern prose. Comedy (Goldoni). Time to be arranged. Students are advised to postpone the election of this course until they have completed French 1 or its equivalent. Professor Bruce.

2. Advanced Italian. Two credit hours. Three terms. Manzoni (I Promessi Sposi). Dante (Vita Nuova, Inferno.) With lectures. *M., W., at* 3. Prerequisite, course 1. Professor Bruce.

III. SPANISH.

1. Elementary Spanish. Four credit hours. Three terms. Grammar (Hills and Ford's or Edgren's) and Ingraham's Victoria y Otros Cuentos. Easy prose and plays. Composition and conversation. *M., Tu., Th., F., at* 9, 11, *or* 2. Professor Bowen, Associate Professor Ingraham, Mr. Ewington.

2. Modern Spanish Literature. Four credit hours. Three terms. *Tu., W., Th., F., at* 3. Prerequisite, course 1, or equivalent. Associate Professor Ingraham.

The Modern Novel and Drama. Lectures covering a survey of the literature. Composition and conversation continued.

3. Classical Prose and Drama. Two credit hours. Three terms. *Tu., Th., at* 2. Prerequisite, courses 1 and 2. Professor Bowen or Associate Professor Ingraham.

Cervantes (selections from Don Quixote), Calderon and others. Lectures.

FOR GRADUATES ONLY

31. Introduction to Romance Philology. Two credit hours. Three terms. Time to be arranged. Professor Bowen.

Origin and distribution of the Romance Languages and dialects. Comparative phonology and morphology of French, Italian, and Spanish. Peculiarities of syntax. Lectures and reading of illustrative texts.

32. OLD PROVENÇAL. One credit hour. Three terms. Time to be arranged. Professor BOWEN.

Study of the language and literature of the Troubadours. Appel's Provenzalische Chrestomathie (2d edition).

33. HISTORY OF THE LITERARY MOVEMENT IN FRANCE IN THE FIRST HALF OF THE NINETEENTH CENTURY. Two credit hours. Three terms. Time to be arranged. Professor BRUCE.

The attention of all students in Romance Languages is called to course 22 in Latin, given by Professor Elden, on the subject of Roman and Comparative Literature. This course is cordially recommended.

SOCIOLOGY

(See Economics and Sociology.)

SPANISH

(See Romance Languages.)

ZOOLOGY AND ENTOMOLOGY

(Office, Room 1, Biological Hall.)

PROFESSOR OSBORN, PROFESSOR LANDACRE, ASSOCIATE PROFESSOR HINE, MR. H. P. SEVERIN, MR. H. C. SEVERIN, MISS HOLLISTER

31. ELEMENTARY ZOOLOGY. Three credit hours. Three terms. Lecture, *Tu., Th., at* 8, *or M., F., at* 10. Laboratory, *Tu. or Th.,* 1 *to* 3. Professor OSBORN, Professor LANDACRE.

An introductory general course intended for general culture and as a foundation for the more advanced courses.

2. COMPARATIVE ANATOMY OF VERTEBRATES. Three to five credit hours. Three terms. Quiz, *W., at* 1. Laboratory, *M., Tu., W.,* 1 *to* 4. Prerequisite, course 1, or equivalent. Professor LANDACRE.

12. GROSS ANATOMY OF THE FROG. Three to five credit hours. First term. Time to be arranged. Prerequisite, course 1. Professor LANDACRE.

13. MINUTE ANATOMY OF THE FROG. Three to five credit hours. Second term. Time to be arranged. Prerequisite, course 1. Professor LANDACRE.

14. EMBRYOLOGY OF THE FROG. Three to five credit hours. Second term. Time to be arranged. Prerequisite, course 1. Professor LANDACRE.

15, 16, 17. INVERTEBRATE MORPHOLOGY. Three to five credit hours.

Three terms. Time to be arranged. Prerequisite, course 1. Professor Osborn.

*18. Invertebrate Embryology. Three to five credit hours. Three terms. Laboratory. Time to be arranged. For graduates. Prerequisite, courses 1 and 2. Professor Osborn.

19. Vertebrate Embryology. Karyokinesis, etc. Three to five credit hours. First term. Lecture, *Th., at* 1; laboratory, *Th., F.,* 1 *to* 4. Prerequisite, course 1. Professor Landacre.

20. Vertebrate Embryology: Chick and Mammal. Three to five credit hours. Second and third terms. Lecture, *Th., at* 1; laboratory, *Th., F.,* 1 *to* 4. Prerequisite, courses 1 and 19. Professor Landacre.

FOR ADVANCED UNDERGRADUATES AND GRADUATES.

34. Evolution. Three credit hours. Three terms. Prerequisite, one year of zoology or equivalent. *M., W., F., at* 8. Professor Osborn, Professor Landacre.

A discussion of the facts, factors, and theories of the origin, development and distribution of animal life. The first term will deal mainly with adaptations and other phases of life fundamental to the theories of evolution; the second term especially with variation and heredity as factors in evolution, and also their practical applications in animal breeding; the third term mainly with distribution and relationships involving principles of phylogeny and classification.

*21. Comparative Neurology. Three to five credit hours. Three terms. Time to be arranged. Prerequisite, course 1, or equivalent, but is open to advanced students in psychology and pedagogy. Professor Landacre.

22. Cytology. Three to five credit hours. Three terms. Time to be arranged. Prerequisite, course 31, and equivalent of 2, or 15, 16, 17. Professor Landacre.

23. Entomology. Three to five credit hours. Three terms. Time to be arranged. Prerequisite, course 1. Professor Osborn.

24. Ornithology. Two credit hours. Three terms. Lecture, *M., at* 10. Laboratory, to be arranged. Associate Professor Hine.

25. Research Work. Five to ten credit hours. Three terms. Prerequisite, course 1, and the equivalent of 2, or 15, 16, 17, or 19, 20. Professors Osborn and Landacre.

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* Not given in 1909-1910.

26. SEMINARY. One credit hour. Three terms. *Th., at* 4. Professor OSBORN, Professor LANDACRE.

FOR GRADUATES ONLY

30. INVERTEBRATE ZOOLOGY. Five credit hours. Time to be arranged. Professor OSBORN.

33. VERTEBRATE EMBRYOLOGY. Three to five credit hours. Study of Karyokinesis, Germ layers, organogeny, etc. For graduates only. Professor LANDACRE.

ANNOUNCEMENTS OF OTHER DEPARTMENTS OF THE UNIVERSITY

The faculty of the College of Arts, Philosophy, and Science will accredit towards the degree of Bachelor of Arts a limited amount of work in the courses announced below. The student desiring to elect one or more of these courses is required to file a petition with his election card in June, showing the special purpose which he has in view, and bearing the written approval of the professor in charge of the course desired. The Executive Committee will not count towards the degree in Arts any course named below that is not allied to the work of the student in the College of Arts, Philosophy, and Science. But a student with no conditions outstanding who has at least forty-five term hours to his credit may, without petition, elect any course in the University on which he is prepared to enter, as extra work, not counting towards the degree of Bachelor of Arts.

AGRICULTURAL CHEMISTRY

(Townshend Hall)

PROFESSOR VIVIAN, PROFESSOR WEBER, MR. BEAR, MR. R. C. COLLISON, MR. S. E. COLLISON

18. Food Inspection and Analysis. Three to five credit hours. Three terms. Prerequisite, Course 13, or an equivalent preparation in quantitative analysis. Professors Weber and Vivian.

ARCHITECTURE.

(Office, Brown Hall.)

PROFESSOR BRADFORD, ASSOCIATE PROFESSOR CHUBB, MR. HASKETT.

33. Photography. Two credit hours. First, second, and third terms. *M., Tu.,* 1 *to* 3; *Th., F.,* 1 *to* 3. Prerequisite, Elementary Chemistry.

36. Photography. Two or three credit hours. Second term. Prerequisite, Course 33 or an equivalent.

ART

(Office, Hayes Hall.)

ASSOCIATE PROFESSOR LAVER, ASSISTANT PROFESSOR TITSWORTH

10. DESIGN AND COMPOSITION. Two credit hours. First term. Time to be arranged.

11. Continuation of 10. Two credit hours. Second term. Time to be arranged.

12. Continuation of 11. Two credit hours. Third term. Time to be arranged

13. DESIGN AND COMPOSITION. Two credit hours. First term. Advanced work in Art 10. Prerequisite, Art 10.

14. DESIGN AND COMPOSITION. Two credit hours. Second term. Advanced work in Art 11. Prerequisite, Art 11.

15. DESIGN AND COMPOSITION. Two credit hours. Third term. Advanced work in Art 12. Prerequisite, Art 12.

20. CHARCOAL DRAWING FROM STILL LIFE, NATURE, AND CASTS. One to three credit hours. First term. Time to be arranged.

21. CHARCOAL DRAWING FROM COSTUMED MODEL. One to three credit hours. Second term. Time to be arranged.

22. CHARCOAL DRAWING, LANDSCAPE AND STILL LIFE. One to three credit hours. Third term. Time to be arranged.

30. PENCIL DRAWING FROM STILL LIFE AND NATURE. One credit hour. First term. Time to be arranged.

31. PENCIL DRAWING FROM LIFE AND STILL LIFE. One credit hour. Second term. Time to be arranged.

32. PENCIL DRAWING OUT OF DOORS. One credit hour. Third term. Time to be arranged.

35. PAINTING IN OIL OR WATER COLOR. One to three credit hours. First term. Time to be arranged.

36. Continuation of 35. One to three credit hours. Second term. Time to be arranged.

37. LANDSCAPE. One to three credit hours. Third term. Time to be arranged.

40. CHARCOAL, PENCIL, OR PEN SKETCHING FROM LIFE.

CIVIL ENGINEERING

(Office, Room 33, Brown Hall.

ASSISTANT PROFESSOR CHAMBERLIN, MR. WARD

(Of the twenty-five courses offered in the Department of Civil Engineering, the following course is open to students of the College of Arts, Philosophy, and Science:)

21. Surveying. Three credit hours. Third term. *M., W., F., at* 9. Prerequisite, Mathematics 21, 22, 23 or equivalent. Assistant Professor Chamberlin, Mr. Ward.

DOMESTIC SCIENCE
(Hayes Hall)

PROFESSOR WARDALL, ASSOCIATE PROFESSOR WHITE, ASSOCIATE PROFESSOR FLINT

I. DOMESTIC SCIENCE

1. The Selection and Preparation of Foods. Three credit hours. First term. *M., at* 8; *M., Tu.,* 1 *to* 3, *or Th., F.,* 1 *to* 3, *or Tu., Th.,* 8 *to* 10. Prerequisite, Chemistry 7 or 44. Professor Wardall, Associate Professor White.

A study of food principles, their occurrence in food stuffs, effects of heat, and fermentation, and the comparative cost of nutrients from various sources. Lecture and recitation work is combined with laboratory work. Laboratory fee, $3.00.

2. Continuation of 1. Three credit hours. Second term. Time same as Course 1.

3. Continuation of 2. Three credit hours. Third Term. Time same as Course 1.

II. DOMESTIC ART

1. Textiles. Two credit hours. First term. Recitation, *W., at* 11. Laboratory sections, *Tu., W., or Th.,* 1 *to* 3. Prerequisite, or concurrent, Art 10, 11, 12. Laboratory fee, $1.00.

This course includes the study of fabrics from an historic, economic, and social standpoint. In the laboratory the making of garments involves the proper selection of material and the working out of suitable designs.

2. A continuation of Course 1. Two credit hours. Second term. Recitation *W.,* at 11. Laboratory sections, time same as Course 1.

3. A continuation of Course 2. Two credit hours. Third term. Recitation, *W.,* at 11. Laboratory sections, time same as Course 1.

ENGINEERING DRAWING
(Office, Brown Hall.)

PROFESSOR FRENCH, ASSISTANT PROFESSOR LEWIS, ASSISTANT PROFESSOR ROGERS, ASSISTANT PROFESSOR MEIKEJOHN, MR. TIDBALL, MR. BOTT, MR. NORRIS

(Of the courses offered in the Department of Engineering Drawing, the following are open to students in the College of Arts, Philosophy, and Science:)

1. ELEMENTARY MECHANICAL DRAWING. Two credit hours. First term. *M., F.,* 9 *to* 11; *Tu., Th.,* 9 *to* 11; *M., Tu.,* 1 *to* 3; *Th., F.,* 1 *to* 3; *W.,* 1 *to* 3; *S.,* 8 *to* 10.

2. LETTERING. Two credit hours. Second term. Time same as Course 1. Prerequisite, Course 1.

3. PROJECTION DRAWING. Three credit hours. Third term. Lectures, *M., at* 8; *W., at* 8 *or* 9; *Th., at* 8; *F., at* 8 *or* 9. Practice, time same as Course 1.

15. TECHNICAL DRAWING. One and one-half credit hours. Second and third terms. *W.,* 1 *to* 3.

20. MECHANICAL DRAWING. One credit hour. First term. *W.,* 1 *to* 3.

24. FREEHAND DRAWING. One or two credit hours. First term.

33. PROJECTION DRAWING. Three credit hours. First term.

34. DESCRIPTIVE GEOMETRY. Three credit hours. Second term. Prerequisite, Drawing 33.

35. ADVANCED DESCRIPTIVE GEOMETRY. Three credit hours. Third term. Prerequisite, Drawing 34.

45. TECHNICAL DELINEATION. Pencil Rendering. Two credit hours. First term. Prerequisite, Drawing 26. *Tu., Th.,* 10 *to* 12.

46. TECHNICAL DELINEATION. Elementary Pen and Ink Rendering. Two credit hours. Second term. Prerequisite, Drawing 45. *Tu., Th.,* 10 *to* 12.

47. TECHNICAL DELINEATION. Brush Rendering. Two credit hours. Third term. Prerequisite, Drawing 45. *Tu., Th.,* 10 *to* 12.

Courses 45, 46, and 47 are designed for students in Biological work and provide training in rendering in pencil, pen and ink, and brush.

ELECTRICAL ENGINEERING

(Office, Engineering Laboratory)

PROFOSSOR CALDWELL, ASSOCIATE PROFESSOR HUNT, ASSISTANT PROFESSOR UPSON

30. DIRECT CURRENT DYNAMO MACHINERY. Four credit hours. Second and third terms. Prerequisite, Physics 4 and 6, or its equivalent. Associate Professor HUNT, Assistant Professor UPSON.

5. ELECTRICAL ENGINEERING. Four credit hours. First and second terms. Prerequisite, Mathematics 43, and Physics 2. Associate Professor HUNT, Assistant Professor UPSON.

15. Alternating Current Circuits and Machinery. Two credit hours. Third term. *Tu., Th., at* 10. Prerequisite, course 1. Professor Caldwell.

16. Continuation of 15. Three credit hours. First term. *M., Tu., W., at* 11. Prerequisite, course 15.

17. Continuation of 16. Two credit hours. Second term. *M., W., at* 8. Prerequisite, course 16.

11. Advanced Dynamo. Laboratory. Three credit hours. Three terms. First, second and third terms. Must be accompanied by courses 16 and 17. Professor Caldwell, Assistant Professor Upson.

HISTORY AND PHILOSOPHY OF EDUCATION

(Office, Old Mechanical Laboratory Building)

PROFESSOR GRAVES

FOR ADVANCED UNDERGRADUATES AND GRADUATES

1. History of Education. Three credit hours. Three terms. *M., W., F., at* 11. Texts: Graves's A History of Education, Monroe's Text-books, and Quick's Educational Reformers.

3. Educational Classics. Three credit hours. Three terms. *M., Tu., Th., at* 11. Prerequisite, course 1.

PRIMARILY FOR GRADUATES

4. History of European School Systems. Two credit hours. Three terms. *Tu., Th., at* 9. Prerequisite, courses 2 and 3.

6. Seminary in the History of Education. One credit hour. Three terms. *Tu., at* 2. Prerequisite, course 4.

MECHANICAL ENGINEERING

(Office, Engineering Laboratory)

PROFESSOR MAGRUDER

34. Thermodynamics. Five credit hours. Second term. *M., Tu., W., Th., F., at* 8. Open only by permission of instructor. Professor Magruder.

MECHANICS

(Office, Room 219, School of Mines Building.)

PROFESSOR J. E. BOYD, ASSOCIATE PROFESSOR CODDINGTON, MR. BUCHER

1. Statics. Five credit hours. First term. *M., Tu., W., Th., F., at* 8, 9 *or* 11. Prerequisite, Mathematics 43. Text-book, Hoskins' Theoretical Mechanics.

2. Strength of Materials. Kinetics. Five credit hours. Second term. *M., Tu., W., Th., F., at* 8, 9, *or* 11. Prerequisite, Mc-

chanics 1. Text-book: Merriman's Mechanics of Materials, Cambria Steel.

3. KINETICS AND HYDRAULICS. Five credit hours. Third term. *M., Tu., W., Th., F., at* 8, 9, *or* 11. Prerequisite, Mechanics, 2. Text-books: Hoskins' Theoretical Mechanics, Goodman's Applied Mechanics.

4. ADVANCED THEORETICAL MECHANICS. Three credit hours. Three terms. For graduates and advanced undergraduates. Prerequisite, Mechanics 3 and Differential Equations.

METALLURGY AND MINERALOGY

(Office, School of Mines Building.)

PROFESSOR N. W. LORD, ASSOCIATE PROFESSOR SOMERMIER*, ACTING ASSISTANT PROFESSOR DEMOREST, MR. M'QUIGG.

2. MINERALOGY. Three credit hours. Third term. *M., W., F., at* 11. Prerequisites, Mathematics 21, 22, 23, or equivalent, and Chemistry 7 or 44. Professor LORD.

3. DETERMINATIVE MINEROLOGY. Five credit hours. Third term. *M., Tu.,* 1 *to* 5. Prerequisite, course 2. Professor LORD, Assistant Professor DEMOREST.

5. METALLURGICAL LABORATORY. Five credit hours. Three terms. *M., Tu., W., or W., Th., F.,* 1 *to* 4. Prerequisite, Physics 2, and two years of Chemistry. Assistant Professor DEMOREST.

* Absent on leave 1908-1909.

GENERAL INFORMATION

THE BRYAN PRIZE

Through the generosity of Hon. William J. Bryan an annual prize of fifteen dollars is offered for the best essay on the principles underlying the form of government of the United States. Competition for this prize is open to all students of the University. For further information, make inquiry of the head of the department of American History and Political Science.

HIGH SCHOOL COMMITTEE

In order to serve the schools of the state, the Faculty has provided a committee, one of the duties of which is to assist graduates of the University to teaching positions for which they are best fitted. Any student of the University intending to teach is invited to enroll his name with the committee on a blank provided for that purpose. Blanks may be obtained from the Executive Office. Graduates of the University who are already engaged in teaching are also cordially invited to correspond with the appointment committee with a view to bettering their positions. Correspondence is invited from Boards of Education and from Superintendents and Principals of schools in need of teachers. No fee is charged for the services of the committee.

FEES AND EXPENSES

GENERAL CHARGES

All term dues must be paid at the opening of each term as a condition of admission to classes.

Incidental Fee.—A charge of six dollars a term, eighteen dollars a year, is made against all students, under the head of incidental expense. In the case of former students if this fee is not paid until the second day of the term one

dollar will be added, and for each succeeding day of delinquency fifty cents will be added.

TUITION.—Tuition is free in the College of Arts, Philosophy, and Science. But students who elect five hours or less in the College of Law pay a fee of $7.50 per semester; more than five hours, $22.50.

LABORATORY FEES

A fee of one dollar per term is charged in all laboratory courses. In addition to this fee, all students are required to pay for materials consumed. All first-year students in elementary chemistry (Chemistry 3, 7, 12) will be required to buy a $10.00 card. This will cover the expense for the year with reasonable care in the use of supplies.

The laboratory courses, for each of which the fee is one dollar per term, are as follows: Anatomy and Physiology, 3, 4, 5, 9, 11; Astronomy, 2, 4, 5, 6; Bacteriology, 5, 6, 7, 10, 11, 12, 15; Botany, all courses; Chemistry, all courses except 11, 21, 30, 35, 40, 25, 26, 28, 36; Civil Engineering, 21; Domestic Science, 1, 2, 3; Domestic Art, 1, 2, 3; Engineering Drawing, all courses; Electrical Engineering, 7, 9, 11; Geology, 13, 14, 15, 16, 17 (Winter Term), 19, 20; Metallurgy, 3, 5; Physics, 11, 12, 13, 15; Zoology and Entomology, all courses except 26, 27.

LOCKER FEE

A fee of one dollar a term is required from those who make use of a locker in the gymnasium.

CADET UNIFORMS

The uniform with which the members of the battalion are required to provide themselves costs (without overcoat) about fourteen dollars. It is quiet in pattern, and is designed to be worn in place of civilian dress.

GRADUATION FEE

A fee of five dollars, to cover expense of graduation and diploma, is required of each person receiving one of

the ordinary degrees from the University, and this fee must be paid before the degree is conferred. A like fee of ten dollars is charged to each person receiving one of the higher graduate degrees.

auditor's fees

On presentation to the Bursar of the written consent of the head of a department, and on the payment to the Bursar of an auditor's fee of one dollar, any person engaged in teaching is permitted to attend, in that department, any class or course (not to exceed three hours a week for one-half year) which is announced to be especially for teachers or those intending to teach.

ROOMS AND BOARD

Oxley Hall furnishes accommodations for about fifty-five women students for rooms and board. The dining room in the Hall accommodates about eighty. Applications for rooms or board should be made in advance to Miss Dora Eaton, House Superintendent.

The South Dormitory affords unfurnished rooms for students who desire to board themselves and thus reduce their expenses to a minimum. The expense of living in this way is about two dollars per week. Applications for rooms should be made to the President of the University.

Boarding clubs are also formed in the neighborhood of the University. Furnished rooms are rented at seventy-five cents to one dollar a week for each student, and the cost of table board is two dollars and seventy-five cents to three dollars and a quarter a week.

Board with furnished rooms can be obtained in private families, within convenient distance of the University, at rates varying from three and a half to five dollars per week. The ruling rate may be taken as four dollars.

FELLOWSHIPS

To encourage graduates of this University, and of other similar and approved institutions in this State, to continue their studies and to undertake advanced work leading to the higher degrees, the University has established fellowships in several departments. These demand about one-half of the time of the fellow for laboratory or other similar assistance—as far as possible along the line of his graduate study. The remainder of his time is given to graduate work. The fellowships pay from $150 to $300 for the University year.

CHRISTIAN ASSOCIATIONS

The Young Men's Christian Association has come to occupy a prominent place in university life. It has a membership of about four hundred men, and is affiliated with the World's Student Christian Federation. The Association House furnishes free for the use of its members a reading room, library, magazines and papers, piano, and telephone—a college home.

Religious meetings are held for men on Sunday afternoon; there are also frequent meetings for the promotion of social intercourse and good fellowship. Courses in systematic Bible study and in modern missions are offered. A most helpful feature of the work is that in the interest of new students at the opening of the school year. Desirable rooms and boarding places are found and posted for reference at the Association House. Representatives of the Association meet the trains, assist students in finding satisfactory locations, and endeavor in every way to make them feel at home. The Employment Bureau helps to find work.

A copy of the Students' Handbook, giving information about Columbus, the University, and the various college organizations and activities, will be sent free to prospective students. For this handbook or for further information, address the General Secretary of O. S. U. Y. M. C. A., 239 West Tenth avenue, Columbus, Ohio.

The Young Women's Christian Association holds religious meetings regularly at noon on Tuesdays. This organization is active and efficient in working for the higher interests of the young women. Young women planning to enter the University are invited to correspond with reference to board or rooms with the General Secretary, O. S. U. Y. W. C. A., University Hall, Columbus, Ohio.

SELF SUPPORT

There is a large amount of work upon the University farm which is assigned to students, preference being given to those who are studying Agriculture. *But the University cannot promise work to all applicants.* Many students find work in private families, in offices, and in various occupations, by means of which they defray a portion of their expenses. A person of ability and energy, who is master of a trade, or who can do good work of any kind, can generally find employment, but prospective students are cautioned against depending wholly upon such uncertain sources of income.

Students should distinctly understand that where they attempt entire or partial self-support they should lengthen the term of study. An employment bureau is maintained at the University, where the names of those seeking work and of those desiring workers are recorded. Students should report to the Executive Office from time to time as to their needs and their work. This will enable the authorities to be more helpful than otherwise would be possible.

LIST OF ACCREDITED AND RECOGNIZED SCHOOLS IN OHIO

Accredited schools are those four-year secondary schools whose courses of study have been found by inspection to be capable of satisfactorily preparing students for all colleges of the University.

Recognized schools are those three or four-year secondary schools whose courses of study are not capable of preparing students for all colleges of the University, but which have been found by inspection to cover satisfactorily 10 units of the requirements for admission.

These lists are subject to change from year to year as schools are revisited. Persons are advised, therefore, to consult the latest bulletins and catalogues of the University A, shows that a school is accredited; R, that it is recognized.

School	Superintendent	Principal
Akron, A	H. V. Hotchkiss	D. C. Rybolt
Alliance, R	J. E. Morris	J. E. Vaughan
Andover, R	S. A. Harbourt	Mary McDonald
Arcanum, R	O. G. Hershey	C. W. Bingman
Ashland, R	John A. McDowell	R. C. Clark
Ashley, R	L. K. Wornstaff	Lydia Marsh
Ashtabula, A	E. A. Hotchkiss	
Ashtabula Harbor, R	Robert W. Paterson	John E. Ransom
Ashville, R	Stanley Lawrence	Stanley Lawrence
Athens, A	B. O. Skinner	Zella Foster
Baltimore, R	J. H. Horton	J. J. Wagner
Barberton, R	J. M. Carr	G. M. Korns
Barnesville, A	W. R. Butcher	A. H. Denbrock
Batavia, R	F. P. Timmons	Cecile Hulick
Beaver Creek Twp., (Greene Co.) R	R. S. Parsons	R. S. Parsons
Bedford, R	O. W. Kurtz	Miss G. L. Thomas
Bellaire, A	Wilson Hawkins	J. A. Jackson
Bellefontaine, A	J. W. MacKinnon	Annie A. Price
Bellevue, A	E. F. Warner	H. C. Bates
Berea, R	J. B. Mohler	A. G. Yawberg
Bethel Township, Clark Co., R	A. K. Morris	Hester Pherson
Bethel Township, Miami Co., R	R. W. Crist	Walter Peoples

School	Superintendent	Principal
Blanchester, R	C. L. Leahy	H. T. Miller
Bluffton, R	C. A. Arganbright	I. W. Geiger
Bowling Green, A	N. D. O. Wilson	Walter F. Shaw
Brookville, R	A. A. Maysilles	Elizabeth Zehring
Bryan, A	J. W. Wyandt	Orville Smith
Buchtel College Academy, R		C. O. Rundell
Bucyrus, A	W. N. Beethan	C. H. Miller
Byesville, R	B. M. Thompson	R. M. Marlowe
Cadiz, R	J. R. Lehman	S. L. Eby
Caldwell, R	C. J. Foster	Patrick Henry
Cambridge, A	H. Z. Hobson	John H. Harding
Camden, R	J. L. Fortney	L. D. Brouse
Canal Dover, A	F. P. Geiger	A. J. Huffman
Canal Winchester, R	A. A. McEndree	Sara Brown
Canton, A	John K. Baxter	Chas. A. Armstrong
Cardington, R	F. H. Flickinger	W. J. Banker
Carey, R	A. J. Nowlan	Mattie Myers
Carroll, R	E. C. Dilger	J. H. Cooper
Carthage, R	C. A. Wilson	Louise Sherer
Cedarville, R	F. M. Reynolds	L. T. Marshall
Celina, R	S. Wilkin	J. W. Pogue
Centerburg, R	H. C. Fickell	Lottie Grandstaff
Central Institute (Cleveland), R		James G. Hobbie
Chardon, A	W. R. Davis	Leila B. Phinney
Chicago, R	E. A. Evans	J. H. Booth
Chillicothe, A	F. E. C. Kirkendall	W. H. Rice
Cincinnati—	F. B. Dyer	
Hughes, A		E. W. Coy
Walnut Hills, A		W. T. Harris
Woodward, A		E. D. Lyon
Cin. Tech. School, A		L. M. Ballou
Circleville, A	W. E. Sealock	D. B. Clark
Cleveland—	W. H. Elson	
Central, A		Edward L. Harris
East, A		B. U. Rannells
Lincoln, A		James W. McLane
South, A		G. A. Reutenik
West, A		C. L. Lynch
Glenville, A		H. H. Cully

School	Superintendent	Principal
Cleveland Heights, A	C. A. Tilden	C. A. Tilden
Clintonville, R	W. S. Jennings	W. S. Jennings
Clyde, R	A. L. Gantz	Leroy Patton
College Corner, R	C. E. Gillespie	Edith Francisco
College Hill, A	W. H. Altamer	G. M. Tremper
College of Ursuline Sisters (Tiffin)		Sister Mary Agnes
Collinwood, A	Frank P. Whitney	F. C. Rulon
Columbiana, R	W. H. Richardson	Linda L. Snyder
Columbus—	Jacob A. Shawan	
Central, A		W. M. Townsend
East, A		J. D. Harlor
North, A		C. D. Everett
South, A		C. S. Barrett
Columbus School for Girls, A		Miss G. L. Jones Miss Alice Gladden
Columbus Grove, R	J. T. Begg	W. E. Stevens
Conneaut, R	Calvin T. Northrop	Louise E. Kahler
Corning, R	F. W. Huston	J. S. Saffell
Coshocton, A	C. E. Bryant	F. D. Garbison
Covington, A	L. J. Bennett	Frances Bowdle
Crestline, R	H. D. Clarke	G. A. Davis
Cumberland, R	G. E. Bell	W. S. Kingston
Cuyahoga Falls, R	W. H. Richardson	H. O. Bolich
Dayton, A	E. Brown	Chas. L. Loos, Jr.
Defiance, A	F. E. Reynolds	H. B. Mullholand
DeGraff, R	N. H. Stull	R. B. Curl
Delaware, A	W. McK. Vance	Maude I. Myers
Delphos, A	E. L. Mendenhall	I. F. Matteson
Delta, A	G. W. Hoffman	Viola B. Wilkins
Dennison, R	W. H. Angel	I. A. Wilson
Deshler, R	W. M. Schumacher	E. O. Fairchild
Dresden, R	E. E. Smock	Ida Warden
East Cleveland, A	W. H. Kirk	W. H. Kirk
East Liverpool, A	F. H. Warren	Florence Updegraff
Eaton, A	F. B. Bryant	John O'Leary
Eldridge's School (Worthington), R		Mrs. Gertrude D. Eldridge
Elyria, A	W. R. Comings	H. M. Ebert
Euclid, R	J. C. Oldt	Mary E. Gould

School	Superintendent	Principal
Fayette, R	C. D. Perry	E. M. Hoover
Findlay, A	J. W. Zeller	J. F. Smith
Fort Recovery, R	James Ross	Charles Sunderman
Fostoria, A	R. W. Solomon	Ida McDermott
Franklin School (Cincinnati), A		Joseph E. White G. S. Sykes
Fredericktown, R	W. W. Borden	W. W. Borden
Fremont, A	J. E. Collins	H. M. Lowe
Friends' Boarding School (Barnesville), R		B. J. Thomas
Galion, A	I. C. Guinther	E. H. White
Gallipolis, A	H. E. Conard	L. W. MacKinnon
Garrettsville, R	E. F. Robison	V. A. Libbey
Geneva, A	J. E. Fitzgerald	J. D. Marshall
Georgetown, R	A. F. Waters	T. E. Hughes
Germantown, A	C. W. McClure	S. M. Heitz
Gibsonburg, R	S. H. Benson	R. E. Stone
Girard, R	B. D. Hirst	W. Ray Wheelock
Glendale, A	E. H. Foster	E. H. Foster
Grand River Institute, A		O. J. Luethi
Granville, R	J. R. Clements	Flora Hoover
Greenfield, A	E. W. Patterson	Roy Harris
Greenville, A	J. J. Martz	J. L. Selby
Greenwich, A	J. H. Diebel	Wm Tait
Grove City, R	A. C. Fries	C. F. Neiswender
Groveport, R	M. C. Warren	J. F. Paxton
Hamilton, A	Darrell Joyce	W. P. Cope
Harmony Township (Clark Co.), R	David Neer	Carlton Henry
Harrison, R	Thos. P. Pierce	Mary A. Curran
Harrison Twp., (Mont. Co.), R	D. W. Klepinger	W. H. Leiter
Harrison Twp (Preble Co.), R	C. S. Bunger	C. A. Huffman
Hartwell, A	J. S. Trisler	J. C. Mauchley
Hicksville, R	C. C. Nardin	A. Z. Penrose
Highland, R	C. W. Johnson	Anna G. Smith
Hilliards, R	Chauncey Lawrence	J. B. Phillips

School	Superintendent	Principal
Hillsboro, A	W. E. Arter	J. B. Conard
Home City, R	J. O. Falkinburg	Clara E. Falkinburg
Hudson, R	T. F. Leonard	Marion Stockwell
Ironton, A	S. P. Humphrey	T. Howard Winters
Jackson, A	J. E Kinnison	M. A. Henson
Jefferson, A	H. S. Foote	Mary I. Hoskins
Jeffersonville, R	M. E. Wilson	Mrs. Mary A. McCoy
Kent, A	R. P. Clark	W. A. Walls
Kenton, A	N. E. Hutchinson	Joseph T. Glenn
Kingston, R	C. M. Agler	Anna K. Korst
Kingsville, R	W. B. Simcox	
Kirtland, R	A. R. Morris	
Lakeside, A	H. O. Hannah	Margaret Hull
Lakewood, A	J. M. H. Frederick	H. W. Kennedy
Lancaster, A	H. A. Cassidy	W. C. Brashares
Lebanon, R	J. M. Hamilton	J. W. Lyle
Leetonia, R	J. W. Moore	C. C. Kochheiser
Leipsic, R	W. S. Sackett	Le Roy Buckingham
Lexington, R	H. H. Phelps	David Frasher
Lima, A	J. A. Davidson	S. Steffens
Lima Twp., (Licking Co.), R	E. T. Osborn	A. R. Shadle
Lisbon, A	G. M. Bingham	H. S. Moffitt
Lockland, A	S. T. Dial	Howard Hollenbach
Logan, A	H. F. Silverthorn	Chas. C. Garman
London, A	Wm. McClain	Marion Schlesinger
Lorain, R	A. C. Eldredge	D. J. Boone
Madison, R	Geo. C. Von Beseler	Lois Ellet
Madison Township (Pickaway Co.), R	Charles C. Evans	Charles C. Evans
Madisonville, A	C. M. Merry	(Mrs.) J. M. Bryan
Mad River Township (Enon Village). R	J. R. Clarke	J. R. Clarke
Malta, R	George M. Strong	L. E. Coulter
Mansfield, A	H. H. Helter	Harland E. Hall
Mantua, R	C. F. Becker	Alice M. Chalker
Marietta, A	J. V. McMillan	W. H. Maurer

School	Superintendent	Principal
Marion, A	H. L. Frank	C. H. Winans
Martins Ferry, A	L. E. York	O. C. Hursh
Marysville, A	L. B. Demorest	D. H. Sellers
Massillon, A	C. L. Cronebaugh	Goffrey A. Lyon
Mechanicsburg, A	J. W. Bowen	W. G. Snavley
Medina, A	C. C. Carlton	Charles Bulger
Miamisburg, A	W. T. Trump	Harris V. Bear
Middleport, R	A. W. McKay	Sara R. Brown
Middletown, A	Arthur Powell	Geo. C. Stahl
Milford, R	J. L. Fortney	L. D. Grannis
Millersburg, A	O. O. Fisher	A. W. Elliott
Montpelier, R	T. G. Paseo	F. W. Leist
Mt. Gilead, R	C. B. Stoner	F. J. Ryan
Mt. Pleasant, R	F. D. Ring	C. E. Hoskinson
Mt. Sterling, R	Frank E. Wilson	Kathryn Weber
Mt. Vernon, A	J. S. Alan	R. E. Offenhauer
Napoleon, A	P. C. Zemer	F. W. Leist
Nelsonville, A	Aaron Grady	O. C. Jackson
Newark, A	J. D. Simkins	T. Otto Williams
New Bremen, R	C. F. Limbach	J. Halsema
New Carlisle, R	Alfred Ross	Ada B. Koontz
New Holland, R	G. A. Bricker	E. N. Dietrich
New Lexington, R	J. M. Gordon	E. C. Bussert
New London, A	W. H. Mitchell	Stella M. Townsend
New Lyme Institute, A		H. C. White
New Philadelphia, A	G. C. Maurer	G. A. Wyly
New Richmond, R	S. L. Turnipseed	Margueret T. Rowell
New Vienna, R	J. L. Cadwallader	Clifford Thompson
Niles, R	F. J. Roller	W. H. C. Newington
North Baltimore, A	G. L. Brown	Elizabeth Brown
Norwalk, R	A. D. Beechy	James E. Cole
Norwood, A	W. S. Cadman	W. W. McIntire
Oak Harbor, R	H. H. Hoffman	(Mrs.) Sarah R. Gill
Oberlin, A	R. L. Rawdon	W. H. McCall
Oberlin Academy, A		J. F. Peck
Ohio Military Institute, R	A. M. Henshaw	S. P. C. Roberts
Orrville, R	A. H. Etting	A. J. Gerber

School	Superintendent	Principal
Osborn, R	W. H. Batson	Winifred Creamer
Ottawa, A	G. J. Keinath	L. F. Gehres
Oxford Col. Acad., A	Jane Sherzer	Catherine Cox
Painesville, A	F. H. Kendall	A. H. Mabley
Pandora (Riley Township), R	C. D. Steiner	Cary O. Altman
Pataskala, R	E. E. Atwell	J. C. Evans
Pemberville, R	D. J. Williams	Wynonah Thompson
Perrysburg, R	D. A. Haylor	Olive Woodard
Piqua, A	J. R. Beachler	D. R. Ellabarger
Plain City, R	J. A. Runyan	Lola A. Smythe
Pleasant Hill, R	S. C. Morton	J. H. Beeson
Pleasant Ridge, A	F. L. Simmerman	
Pleasantville, R	E. L. Porter	C. W. Andrews
Pomeroy, R	C. T. Coates	Dollie Hooper
Port Clinton, R	C. C. Underwood	Charlotte M. Ward
Portsmouth, A	Frank Appel	W. D. Galliland
Quaker City, R	W. G. Wolfe	J. C. Eagleson
Ravenna, A	E. O. Trescott	H. B. Turner
Reynoldsburg, R	Wm. S. Coy	Lucy Brinkerhoff
Richwood, R	R. H. Allison	B. C. Smith
Ripley, R	R. B. Smith	H. L. Geesling
Sabina, R	M. J. Flannery	Leo E. Plymire
Salem, A	J. S. Johnson	B. F. Stanton
Salineville, R	F. W. Reinoehl	Edna Walls
Sandusky, A	H. B. Williams	Geo. C. Dietrich
Shelby, A	S. H. Maharry	D. J. Schaeffer
Sidney, A	Herbert R. McVay	Lee A. Dollenger
Smead School (Toledo), A	Mary E. Smead	Rose Anderson
Somerset, R	W. L. Atwell	R. E. Beck
South Charleston, R	H. W. Paxton	Mrs. E. W. Bradley
Spencerville, R	Thos. J. Class	Wm. Carolus
Springfield, A	Carey Boggess	C. C. Patterson
Steubenville, A	R. L. Ervin	J. Vernon Cox
St. Mary's, A	C. C. McBroom	J. Howard Spohn
St. Paris, R	Jas. H. Fortney	Florence Hunter
St. Raphael's School, A		Sister Rosetta
Sunbury, R	J. J. Phillips	Milton Utley

School	Superintendent	Principal
Swanton, R	C. O. Castle	L. W. Bates
Tiffin, A	C. A. Krout	H. H. Frazier
Tippecanoe City, R	E. R. Rike	A. C. Pense
Toledo, A	Chas. L. Van Cleve	Wm. B. Guitteau
Troy, A	C. W. Cookson	Edward M. Traber
Uhrichsville, A	L. E. Everett	C. W. Jackson
Union City (Ind.), A	W. H. Sidebottom	Edith Huston
University School (Avond., Cin.) ,A		William E. Stillwell
University School (Cleveland), A		Harry A. Peters
Upper Sandusky, A	R. J. Kiefer	E. L. Wolff
Urbana, A	I. N. Keyser	H. N. Morton
Urbana Univ., A	Paul H. Seymour	Russell Eaton
Ursuline Acad. (Brown Co.), R		Sister M. Baptista
Utica, A	F. P. Householder	
Van Wert, A	J. P. Sharkey	Orrin Bowland
Wadsworth, R	A. J. Krabill	Frank L. Lytle
Wapakoneta, A	Charles Haupert	Mary O. Conrath
Warren, A	C. E. Carey	F. E. Ostrander
Washington C. H., A	James T. Tuttle	Frederic C. Peters
Wauseon, A	C. J. Biery	Orille Eastman
Waverly, R	J. F. Henderson	W. C. Dyer
Wellington, A	R. H. Kinnison	Elizabeth Day
Wellston, A	E. S. McCall	J. W. Whiteside
Wellsville, A	J. L. MacDonald	Ruby C. Mason
West Alexandria, R	L. D. Brouse	Clara Smith
Westerville, R	Lew. W. Warson	J. F. Nave
West Jefferson, R	L. C. Dick	Maie Walker
West Mansfield, R	O. H. Maffet	Mary J. Holloway
West Milton, R	Lee Waldorf	C. H. Teach
West Unity, R	W. A. Salter	Mable Tinkham
Willoughby, A	S. D. Shankland	Edward M. Ottis
Wilmington, R	E. P. West	F. P. Blair
Woodsfield, R	H. J. Scarborough	W. G. Wolff
Wooster, A	D. L. Thompson	Laura B. Kean

School	Superintendent	Principal
Worthington, R	J. J. McDonald	Arthur L. Sperry
Wyoming, A	C. S. Fay	Evelyn M. Prichard
Xenia, A	Edwin B. Cox	Geo. J. Graham
Youngstown, A	N. H. Chaney	Wells L. Griswold
Zanesville, A	W. D. Lash	Ira C. Painter

For a list of the schools outside of Ohio on the accredited list of the North Central Association of Colleges and Secondary Schools see the University Catalogue.

UNIVERSITY OF ILLINOIS-URBANA
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